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THE

# BRICKBUILDER

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# The Brickbuilder.

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## THE BRICKBUILDER.

AN ILLUSTRATED MONTHLY DEVOTED TO THE ADVANCEMENT OF BRICK ARCHITECTURE.

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There is, perhaps, no practical question which just now is of more importance to brickmakers and designers of brick architecture than the production of moulded and ornamental brick of good design. We have repeatedly called attention to the lack of really first-rate mouldings and ornamental members in most of the brickmakers' catalogues, and we have emphasized this by publishing some of the best examples of old Italian brickwork translated into modern American brick, and by publishing examples of modern English moulded bricks from the makers' catalogues, which, though not above criticism, are still better than most of the mouldings produced by our brickmakers. Architects can, of course, and often do, have special moulded brick made to suit a particular design; but in most cases the use of moulded brick is — both on account of the expense and trouble of having special moulded brick made — confined to the mouldings found in the catalogues. Both to architects and brickmakers, then, this question is important. To architects, in order that they may have better mouldings and in larger variety wherewith to produce their effects; and to brickmakers, in order that they may increase the sale of their bricks; for we are convinced that a better line of mouldings would *pay* the manufacturers adopting them. We referred to these facts in an editorial in our last issue, and we recur to the matter again in this number in order to call attention to a letter from a correspondent, which we print in another column, in which a suggestion is made with regard to it. We need hardly say that we shall be glad to co-operate with any brick manufacturers who may wish to take up this matter in any possible way that may be suggested, either by competition in these pages or otherwise. We earnestly hope the matter may be followed up, and something done to initiate this much-needed reform.

In a recent visit to New York we were much struck by a circumstance which showed at once the foolish New York love of the paint pot, and the hideousness that results from its use on a brick wall. One of the large storage warehouses, whose brick walls had been originally covered with the inevitable coating of glaring and uniform red, had, in the course of time, by many rains and frosts, been robbed of so much of its ugly vermillion that it was becoming positively picturesque. The color of the brick itself began to show through in many places, and the streaking of the rain-washed walls had softened the original shrieking red and brought some variety of color until the eye could rest upon it without pain, if not with pleasure. The huge, almost unbroken wall, capped by a fitting cornice, was imposing from its very size and simplicity, and as we

walked up the street we took some pleasure in its restful dignity. The rains of a year or two more, we said to ourselves, will make that wall a thing of beauty. But, alas! as we turned the corner we almost stumbled over a paint pot. Swinging scaffolds were hanging from the lofty cornice, and the greater part of the wall on this side had already been given back to the weary monotony of scarlet, which was rapidly creeping over the rest of the wall like a disease. What a waste of good dollars, devoted solely to making an otherwise pleasant building conspicuously ugly! How often is money denied to our architects to be spent in beauty, and how often, in spite of them, is that same money sacrificed to the demon of ugliness! — or shall we say of conventionality? Only recently we knew of another case, in which the protests of the architect preserved the original soft purplish and varied red of a common brick wall for a number of years unspoiled, to contrast harmoniously with the white marble of the ornamented portions of the building, as in so many old Italian buildings. But in the end, conventionality and the impudent criticisms of neighbors prevailed — for were not all other brick buildings in the neighborhood painted unless of pressed brick? — and the wall at last was painted a staring red. The building lost half its charm; but at any rate such questions as "I wonder what he is going to do with the wall?" or "Didn't he have money enough to paint his house?" were no longer possible. Unfortunately conventionality, rather than beauty, is the most common criterion of criticism. But New-Yorkers are learning; for we saw another building in which the man with the paint pot had carefully imitated brick by brick the variety of color of the mottled Pompeian brick, and as imitation is the sincerest flattery, we were inclined to welcome this sham as the sign of the coming of better things. It is hard, indeed, to understand why the charming variety of color of the light colored bricks, which are rapidly regenerating New York, should be admired in such buildings as the Madison Square Garden and the Judson Memorial, and should not be equally desired for red brick buildings, where this variety is needed so much more to soften the strong color.

The *Architectural Record* for the last quarter of the year has an article on the history of terra-cotta in New York City, which is not without interest, although in the main it is little more than a catalogue of certain buildings in which terra-cotta has been used. It does not touch at all upon the advances which have been made in the right treatment of terra-cotta; in fact, the article seems to be really somewhat more concerned with manufacture than with design. The distinction which is drawn, apparently in all seriousness, between terra-cotta and architectural terra-cotta is somewhat amusing. Some of the statements of fact are not entirely accurate; as that the late H. H. Richardson "in 1887" "began using terra-cotta" and "used it upon Trinity Church in Boston." Trinity Church, Boston, was completed in 1877, and its walls are entirely faced with stone, while Mr. Richardson died in 1886. The crestings of the tile roofs are of terra-cotta, it is true; but these, hardly more than the tile roofs themselves, call for mention in this connection. As a matter of fact, although Mr. Richardson made frequent use of brick, he never — except in roof crestings — made any use of terra-cotta. In his brick buildings the ornamental work was nearly always carved brick, as at Sever Hall, Cambridge, and Trinity Rectory, Boston. Mr. Richardson, in his brick buildings, invariably used a specially made common brick, 12 inches long by about  $2\frac{1}{2} \times 4$  inches. It may

be regarded as in some sense a forerunner of the 12 x 1½ x 4 inch brick—the so-called Pompeian shape now so common. The moulded brick used in Mr. Richardson's work was also common hand-made brick.

The illustrations to the article in the *Architectural Record* to which we have referred might have been made a text from which to preach a sermon how to treat and how not to treat brick and terra-cotta. Among the admirable examples we note especially McKim, Mead & White's charming Russell & Erwin building at New Britain, Conn.; Harrigan's Theatre, New York, an admirable example of rich terra-cotta work, by F. H. Kimball; and the DeVinne Press Building, New York, by Babb, Cook & Willard. In the same number of the *Record*, Wyatt & Nölting's excellent Arundel apartment house at Baltimore, Md., is illustrated. We hope at an early date, as requested by a correspondent in our last number, to take up the subject of terra-cotta design and give it some thorough treatment in a series of articles on its history and theory.

The December number of the *Inland Architect* has some more or less interesting examples of brickwork, chiefly in domestic architecture, by Rogers & Macfarland, and Mason & Rice, of Detroit; and the number of the *American Architect* for December 31 publishes one of Mr. Wheelwright's interesting brick buildings, the East Chester Park Hospital for contagious diseases, and in the same number is a heliochrome of a house for James Charnley, Esq., at Chicago, by Adler & Sullivan, which shows the dignity and grace there may be in a perfectly plain brick wall, when its divisions and openings are

well proportioned. But for the most part in looking over the recent architectural publications, one is struck by the small amount of really good brickwork done and the numerous instances of the misuse and abuse of the material, and we are afraid that the journals are fairly representative of the average of current work. But bad as much of this work is, there is, on the whole, a marked improvement, and certainly no branch of architectural work has made greater or more rapid strides than has brick and terra-cotta work, as shown by the buildings of such firms as McKim, Mead & White, Babb, Cook & Willard, Wilson Eyre, Jr., E. M. Wheelwright, Winslow & Wetherell, F. M. Whitehouse, Eames & Young, and others.

We cannot forbear to express our gratification at the excellent material brought out by our competition for a cheap brick house. Some of the designs to which prizes were not awarded are hardly less good than the prize winners, and we are sure our readers will find valuable suggestions in all of them. All are, more or less, open to criticism in some points; but the designs are serious and thoughtful attempts to solve the problem presented. We do not claim that these designs could in all localities be executed within the limit named; and our jury was requested not to regard the question of cost very strictly. All the designs published seem to come sufficiently near the mark in this respect for the purpose we had in view, viz., to show how attractive an inexpensive brick house can be made. The designs will be found fully discussed in the jury's report which we print in another column.



#### RESTORATION OF AN ANCIENT CHURCH.

The restoration of one of the oldest church edifices on this continent is now in progress at Smithfield, Isle of Wight County, Virginia. It is in a picturesque and historic locality, ten miles diagonally across from Newport News and fifteen from Fortress Monroe, and is connected closely with many memories that are famous in the early history of America. It is a unique example of church architecture, having been constructed of brick with a massive Norman tower fifty feet in height at the western end. The walls of the tower are nearly three feet in thickness at the base, tapering slightly toward the top. That it was built in 1632 is proved by written records and well-sustained tradition, and if any doubts exist they are dispelled by the bricks, many of which bear that date. The tower overshadows the less pretentious nave, which suggests many of the parish churches in England. — *Southern Architect.*

#### A VETERAN BRICKMAKER'S APPROVAL.

We are in receipt of a letter from Mr. J. W. Crary, Sr., of Bluff Springs, Fla., and take the liberty of publishing a portion of it, which shows that the writer is in most thorough sympathy with our work. Mr. Crary has had a long and practical experience, not

only in brickmaking, but in brickbuilding. He is one of the pioneer brickmakers of this country, and has always been in sympathy with everything tending to improve bricks and brickwork. As a writer he is well known in his technical field, and is the author of "Brickmaking and Burning." There are few whose appreciation we value so much.

He says: "You have chosen a good name for your paper; it suggests a special and very important subject. The world has had its *mound* builders, its *stone* builders, and its *wooden* builders, and now we are just fairly entering into the *brick* builders' age. There is a great deal to say on this subject, and as it is comparatively new, you have entered the field, perhaps, more auspiciously than have your contemporaries."

"If I have the right conception of your enterprise, it will be your special object and office to show to the general public the great advantage of brickbuilding and work over all other kinds in the construction of houses, or improvements of roads and streets. All these have a moral, social, political, sanitary, and pecuniary significance, and it requires no begging, or misuse of logic and argument, to show the reasons, or make the facts apparent and impressive."

"I am very truly yours,

"J. W. CRARY, Sr."

## BRICKS AND BRICKWORK.\*

There are few more fascinating subjects of inquiry and speculation combined than the attempt to reconstruct for ourselves the daily life and habits of long-forgotten generations of men. Any such attempt will soon convince us that our present civilization is the direct outcome from conditions of things which were as unlike as possible those with which we are familiar nowadays. Just as Darwin and Huxley have proved that evolution has been at work in the animal world, modifying — by very gradual and, at the time, imperceptible steps — the frame and physical organs of living beings, or, as Mr. Herbert Spencer has pictured for us, the slow growth and development of our social relations, so I believe a careful investigation would show that our dress, our dwellings, and particularly the architectural forms and features of our buildings, whether private or public, can all be traced back to simple elementary types. The history of the development of the human dwelling, if worked out thoroughly in a scientific spirit, would not only be a subject of the deepest interest to all who have to do with modern buildings, but would clear up many of the knotty points upon which archaeologists have never been able to agree, and I venture to hazard the suggestion that such an inquiry would go far to prove that the origin of the ecclesiastical architecture of all times and countries is far humbler than many persons would have us believe. However rude and savage might be the earliest inhabitants of any country, they would soon endeavor by some means to obtain shelter from the elements, and a secure retreat in case of attack from the wild animals and more dreaded men by whom they were surrounded; and the means which they would adopt for this purpose would depend upon the physiography of the district in which they happened for the time to be located. It would frequently happen that, if living on a rocky seacoast or by some swiftly flowing river that had worn away portions of the adjoining hillsides, they would find numerous caves and hollows, the possession of which they would have to dispute with some wild animals, but which would provide the necessary shelter; and it is perfectly certain that primeval men would make use of such cave-dwellings, ready made to their hand by nature, rather than take the trouble of erecting dwellings for themselves.

Every one knows that many of the most interesting relics of prehistoric man have been found in such caverns in all parts of the world. But these early progenitors of ours would have to live, and, as they increased in numbers, they would range over an ever-widening extent of country in order to obtain sustenance, and would gradually begin to make temporary settlements wherever good hunting was to be had. If no caves were to hand they would make use of the most easily manipulated material, namely, the branches and trunks of trees, which, with but slight trouble, could be formed into rude huts and covered with leafy boughs as a roof. In process of time these nomad tribes would cease to live by hunting only, and would begin to practise the elements of agriculture, settle down for a longer period than usual, and form some sort of community, and they would soon turn their attention to the construction of buildings more durable than the shanties which were sufficient for a few days' occupation only. The first rudiments of building were undoubtedly the cutting down and piecing together thicker and more substantial pieces of timber, and, as men grew more expert in the use of their rude implements, simple patterns would be cut in the timber, the repetition of which would form a band of ornament, and we should have the commencement of a timber style of architecture.

In some countries, such as Japan, and to a large extent in China, a timber architecture survived with the growth of civilization, and most picturesque results were obtained from the elaborate carvings and decorations with which these buildings were enriched. But, as a rule, when men began to advance in intelligence and manual skill, and the use of metals was discovered, they could not fail to contrast the ephemeral and destructive character of their timber dwellings with the hard, dense, and apparently imperishable nature of the rocks and stones which formed the everlasting hills which they saw around them. And you must remember that, although no means of quarrying them existed, Nature herself is the most efficient quarryman. Water and frost, heat and cold, will, in the course of ages, break up into manageable sizes the hardest rocks, and I do not think there can be a doubt that the earliest stone buildings were formed of rough pieces of rock picked up

haphazard and roughly fitted together, the interstices being filled up with some softer materials, such as clay, earth, or sand. Any one who has examined the remains of the early British villages which exist in many parts of Cornwall, or the very interesting chapel of St. Piran in that country, which dates from the seventh century, cannot fail to be struck by the fact that, as far as the walls are concerned, the stones had no work on them at all, and were simply brought to the spot just as they were found on the hillside, and placed in position as they happened to fit. The probability is that the first enterprising tribesman who built himself a stone dwelling would run the risk of having it pulled down about his ears by his neighbors for his presumption, but gradually his example would be followed, and we should have the rudiments of a stone architecture. You have probably been wondering what on earth all this has to do with bricks and brickwork, but you will see that I am gradually getting a little nearer my subject.

I have endeavored to sketch out what would happen to the early inhabitants of a stone country, but in many places, as the population increased, communities would settle down in districts where no stone existed and where the soil was chiefly of clay. Here the enterprising builder would find no hard material ready for his use, but he would notice how in summer this clay became exceedingly hard when the sun beat down on it, and the ingenious man would one day be struck with the idea that if he could dig up lumps of clay when it was soft, of a size that could easily be carried, and let the sun harden them, he would be able to transport them where he liked and use them to make a house with; and in this you have the first beginning of a brick architecture.

The use of unburnt, sun-dried bricks dates back to a hoary antiquity; they were made and used for all kinds of building in Egypt, Greece, where the palace of Croesus and that of King Mausolus were thus constructed, Assyria and Persia, and in hot, sunny countries they are still used to-day. Chopped straw was mixed with the clay in order to give it a consistency, and where very little rain fell these bricks answered fairly well. In fact, they formed the principal material with which the enormous and elaborate Ninevite and Babylonish palaces were constructed. If not very carefully tempered, these sun-dried bricks soon become very friable; and it is owing to this fact that, of the majority of those wonderful cities of the East which we read of in history, nothing now remains but a heap of earth and rubbish. But it is also to the fact that the rubbish appeared absolutely valueless that we owe some of the most interesting discoveries of recent years. Wherever any old stone buildings existed that became ruinous or deserted, the neighboring inhabitants invariably used them as a quarry and carried away the stone for their own use; but in Assyria no one ever thought it worth while to cart away crumbling clay and earth.

Some few years ago a Frenchman named Botta obtained the requisite permission to excavate one of these huge mounds in the desert, with only a few straggling huts around it. His explorations were continued by M. Victor Place, and the result was most unexpected, and showed that many of our architectural forms and features have a much greater antiquity than any one imagined. One can easily understand that in a clay district it would soon become apparent that artificial heat, such as might be obtained from a cooking place, hardened the clay and altered its color, but few can have imagined the use that was made of the knowledge of this property in the clay for the production of decorative effects.

These excavations took place about twelve kilometres from the Tigris, at a little village, the modern name of which is Khorsabad, which is on the site of the great palace built by King Sargon. Buried under the *débris* of centuries was found a walled city with fine gateways, the palace itself with a magnificent arched gateway of brick, the voussoirs being carefully moulded to the proper shape and enamelled in various tints, forming a beautiful pattern, and as vivid as if they were lately taken from the kiln; artificially burnt bricks used for paving, and so hard that when struck they rang like a bell, the discoverers using them as paving for the floor of their temporary stables; arched covers for sewers formed of radiating bricks accurately moulded; and glazed wall-tiles in profusion, were discovered. The sizes of the bricks varied considerably, the paving bricks being about  $15\frac{1}{2}$  inches square and  $2\frac{1}{4}$  inches thick; and these were carefully laid in two courses, breaking joint; their color was a dull red, approaching brown. The arch bricks in the conduits or sewers were curiously formed, every alternate course having a keystone of peculiar shape, and M. Place's belief is that the intervals were keyed with ordinary unbaked bricks, thus affording,

\* A paper by Mr. John Slater, B. A., Lond., read on the 5th inst. before the Liverpool Architectural Society.

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in case of repairs being required, an easy means of entering the sewer.

The height of the walls of the palace was about 15 metres or 49 feet, and their thickness 5 metres, while the height of the encircling wall of the city itself was about 23 metres, and the thickness nearly 8 metres. The gateways both of the city and the palace were of such a kind as one would never have expected, being true arched openings about 14 feet in width and 21 feet high, the arches being formed of four rows of bricks very carefully laid, with radiating joints. It is a most extraordinary thing to find these old Assyrian builders planning and executing so fine a work as this. There is one peculiarity about these glazed bricks: although their color was perfect and the bricks themselves uninjured, they were comparatively soft, and the part built into the wall could be dented by the mere pressure of the hand.

Although, as I have stated, bricks were used in Greece, yet the abundance of excellent marble in that country prevented builders having recourse to an artificial material. In Rome, however, and her colonies brick was extensively used, although recent investigations have shown that many of the old Roman buildings which were supposed to be erected of solid brick are really only brick faced, and that the interior of the walls is concrete of the most admirable kind. Apart from this, however, there can be no doubt the Romans were excellent brickmakers, as is evidenced by the present condition of many buildings which were erected in various parts of Europe and this country during the Roman occupation. Take the Basilica at Trèves, for instance, nearly the whole of one side of which is the original brickwork, as well as the lofty arch between the apse and the main body of the building, and if you examine it carefully you will see that there was no scamping in that work. The excellence of Roman bricks is further shown by the fact that in many parts of this country what are undoubtedly Roman bricks that have been taken from some banished building and reused in other places are still found in an unimpaired condition of strength.

After the close of the Roman dominion, brickmaking, as well as nearly all other arts and sciences, fell into decay, and it is a curious fact that, whether in the British Isles or on the Continent, we have very few remains of any brickwork that is not Roman until about the thirteenth century. Saint Sernin, at Toulouse, a church of the twelfth century, is partially built of brick; but the convent of the Jacobins at Toulouse, dating from the end of the thirteenth century, is one of the finest examples of brick building in the Middle Ages. As Viollet-Leduc points out, it is in this part of France that good building stone is entirely wanting, and consequently the architects of the time were compelled to elaborate a style of their own in the only available material, brick. In the thirteenth, fourteenth, and fifteenth centuries French bricks were of larger size, about  $13'' \times 9\frac{1}{4}'' \times 2\frac{1}{4}''$ , and the mortar joints were frequently within a fraction of an inch as thick as the bricks themselves. Moulded bricks are but rarely met with, but cut brickwork of very interesting character is found much oftener. It is clear to my mind that Viollet-Leduc, with all his wide knowledge and versatility, held brick architecture in somewhat low estimation, for two pages in his *Dictionnaire* dispose of the subject.

In Germany you will find brick largely used in those districts where stone is poor and scarce, but the general mode of treatment in that country is somewhat heavy and uninteresting. There are, however, many fine examples. The Marien Kirche at Lübeck, dating from the end of the thirteenth century, is one of the best specimens of German brick architecture, and this church had a great influence on the style of the surrounding parts of the country. At Brandenburg on the Havel is the fine church of St. Catherine, late fourteenth century, which has one of the most elaborately ornamented exteriors of any brick edifice, and at Prenzlau, Thorn, Seehausen, and other places in North Germany are interesting examples. I have noticed one peculiarity in modern brick buildings in Germany, which is this: the joints are left raked out for a depth of about half an inch from the face of the work as if for pointing, but no pointing is inserted. In appearance the effect is not bad, but I should think it must increase the tendency of wet to soak through the walls.

In Spain brick was used extensively and effectively in the Middle Ages, though in a manner quite distinct from that which prevailed in other parts of Europe. Mr. Street has little doubt that by far the larger part of the brickwork in Spain was done by Moorish workmen who retained their old constructive traditions. The special peculiarity of Spanish brickwork seems to be that it was

rarely moulded, and that effect was obtained by simple projections, as at Zaragoza, where patterns are formed by setting forward the bricks forming the outlines from one and a half to two inches beyond the general face of the wall, and filling up the spaces with a diaper of small tiles.

All the Spanish bricks are narrow — a little over one and a half inches thick — and the mortar joints are half an inch thick. The Torre Nueva, in the same city, used to be one of the very finest specimens of brick architecture, octagonal in plan, and the faces covered with diapers; but, unfortunately, this most interesting relic of the Middle Ages has very recently been taken down because of its leaning so much out of the perpendicular. At Toledo the churches of San Roman and Santa Magdalena are excellent examples of the simple and proper use of brickwork. Street says of Santa Magdalena: "The bricks are used very roughly and picturesquely, with a very thick mortar joint, and the consequence is that every part of this work has a value in texture and light and shade undreamt of by those who have never seen anything but our own smooth, smart, and spiritless modern brick walls, built with bad bricks and no mortar." And he goes on to say, in a note: "I am aware that in saying this I blame myself as much as any one else."

The Netherlands are rich in brick buildings, and I know nothing much more interesting than a ramble through the narrow streets of some old Flemish city, where each house seems to try and outdo its neighbor in the quaintness and originality of its steep brick gables. Picturesque, however, as these are, they always strike me as somewhat wanting in grace and refinement. They are the honest and often successful efforts to escape from monotony of a somewhat rough and uncouth race, whose exuberant genius was unrestrained by any knowledge of or love for proportion, such as is shown in classic architecture. The general effect is quite charming, and we, who are accustomed, in the majority of our English cities, to the horrible monotony of a straight skyline formed by a parapet which completely conceals the roofs, can readily forgive the quaint fancy which ran riot in these stepped gables; but the detail is often unsatisfactory, and it is not till we visit North and Central Italy, where the Roman genius and classic traditions had lingered longest, and where the strength of the Northern Gothic was restrained and curbed by the Southern love of color and refinement, that we find the highest development of a brick style in architecture; and an examination of these buildings will, I think, effectively dispel the notion, which some people used to be so fond of holding, that brick is a vulgar and inferior material, unfit for use in a large monumental edifice.

Street's volume on *Brick and Marble in North Italy* came nearly forty years ago as a revelation to many, and the swing of the pendulum which, during the last few years, has sent Gothic art out of fashion, and has brought to the fore a style which, with all its merits, appears to me to carry in itself the seeds of its downfall and decline as surely now as at the time of its first inception, in that lack of reserve and striving after the *outré* and the fantastic which speedily swamped what was true and good and beautiful in the Renaissance, and led to all the monstrosities of the Rococo, — this late rebound, I say, may very probably have prevented the student of the present day from giving that attention to the Gothic architecture of North Italy which it well deserves. Personally, I know of no more delightful field of study. The lovely variety of tint of the mingled brick and stone work, the juxtaposition of the circular and pointed arch, and, above all, the charming simplicity with which the most beautiful effects are produced, all combine to make the brick architecture of this district unequalled in attractiveness.

Take Verona, for instance — the city which lives in my recollection as the most picturesque in its surroundings and the most interesting in its buildings of any that I have ever visited — the first thing that strikes the eye here is the noble campanile which rises from the group of buildings at the corner of the Piazza dei Signori to a height of nearly 320 feet, though its lower part is concealed by surrounding buildings. It is built at first in alternate courses of brick and stone, and then wholly of bricks. For more than half its height it is quite plain, entirely without buttresses, and pierced by three or four small openings only; and then there is a belfry stage, above which is an octagonal story of later date. The belfry windows are contained under a large pointed arch, and are divided into three lights, with coupled marble columns, the voussoirs of the arches being alternately of brick and stone. Verona is absolutely full of objects of interest, but I can only mention a few as illustrating my subject. The cloisters of the Church of

THE BRICKBUILDER.

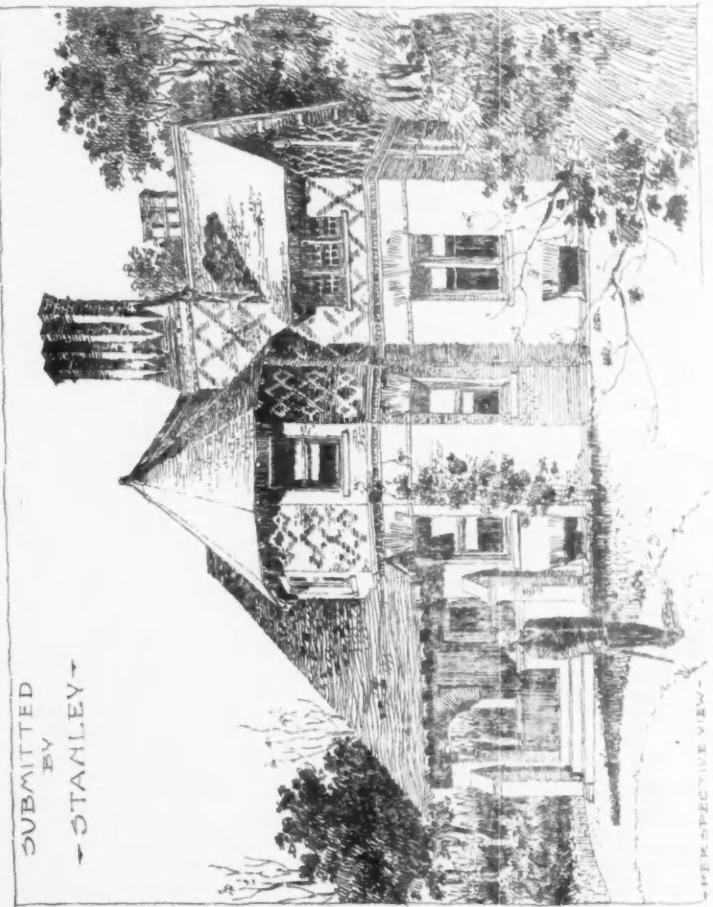
VOL. 1, Nos. 11 & 12.

PLATE 81.

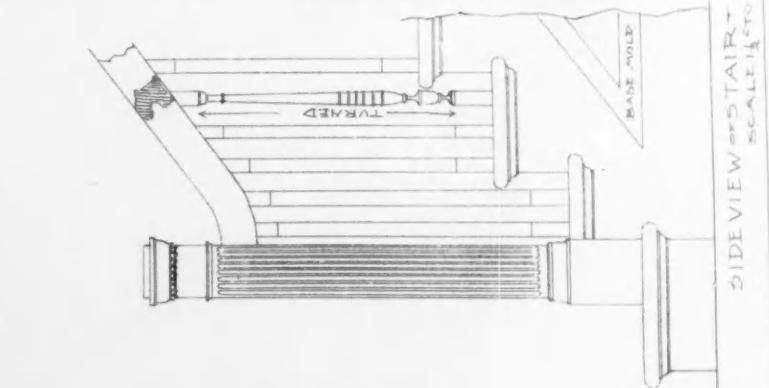


SUBMITTED  
BY  
STANLEY

FOR PERSPECTIVE VIEW  
SCALE  $\frac{1}{16}$



SIDE VIEW  
SCALE  $\frac{1}{16}$



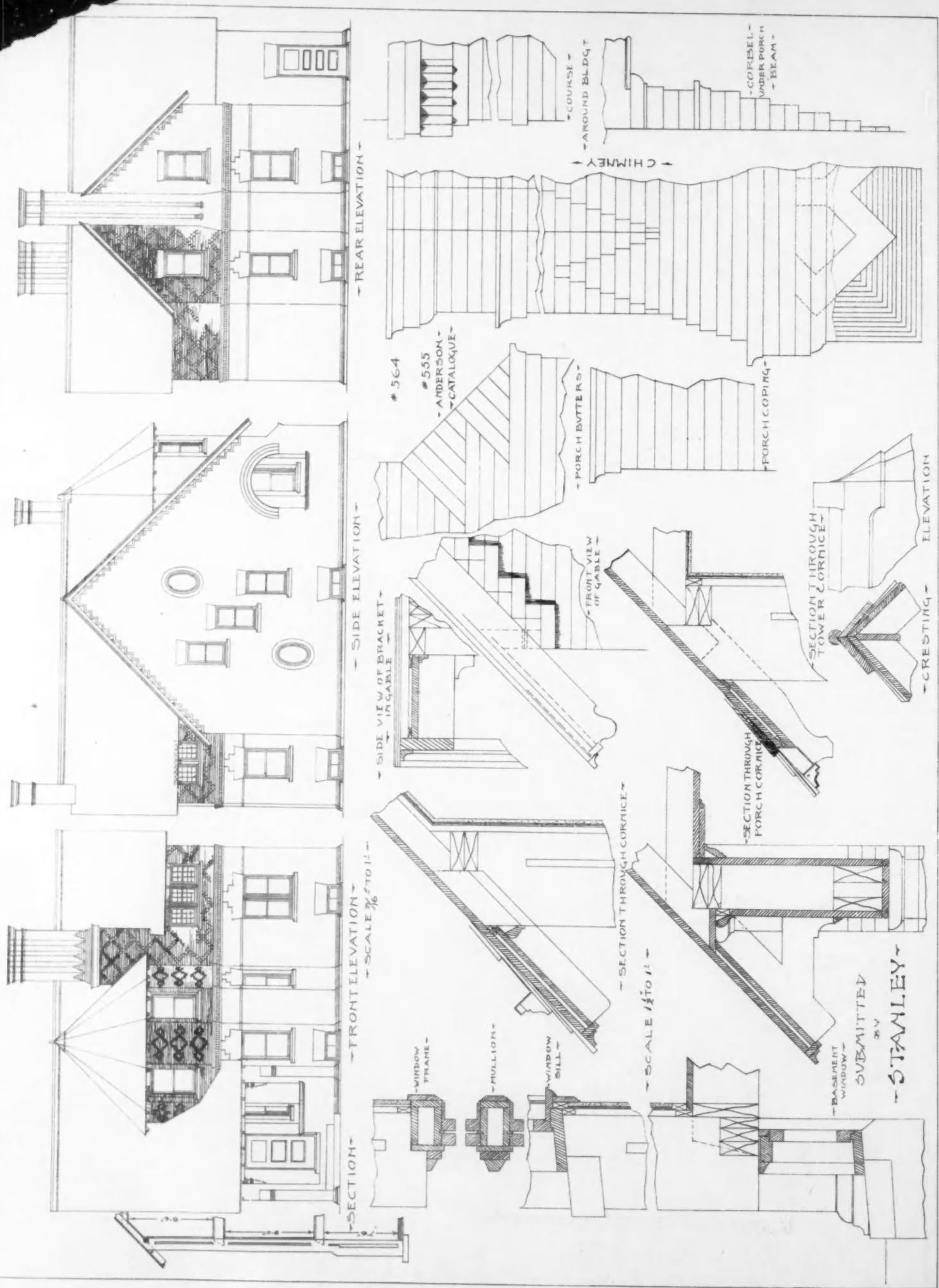
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THE BRICKBUILDER COMPETITION FOR A \$2,000 BRICK HOUSE

CASEIN & BASE  
SCALE  $\frac{1}{16}$

LOT PLAN  
SCALE  $\frac{1}{16}$

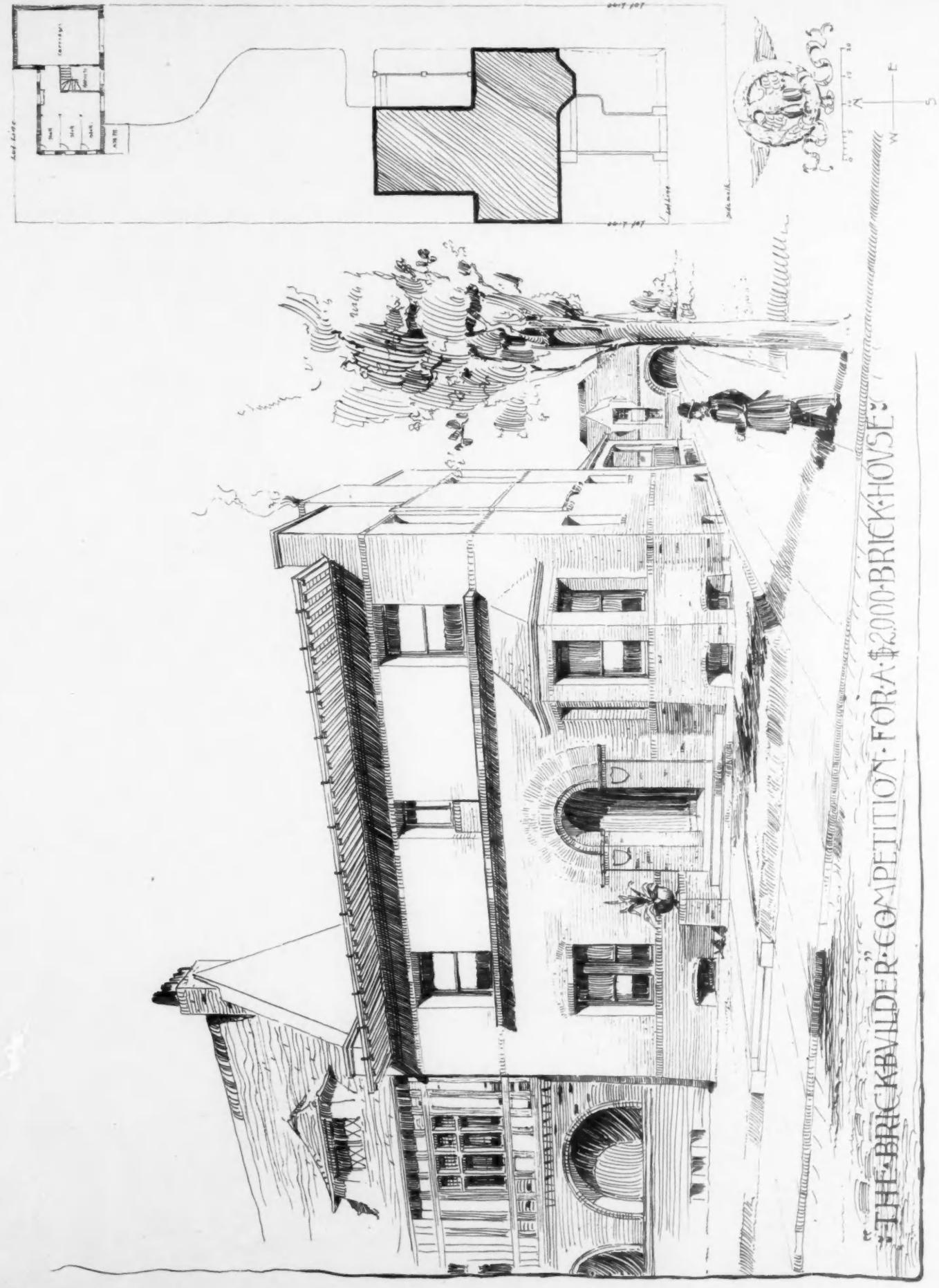
CASEIN & BASE  
SCALE  $\frac{1}{16}$



## THE BRICKBUILDER.

Vol. 1, Nos. 11 & 12.

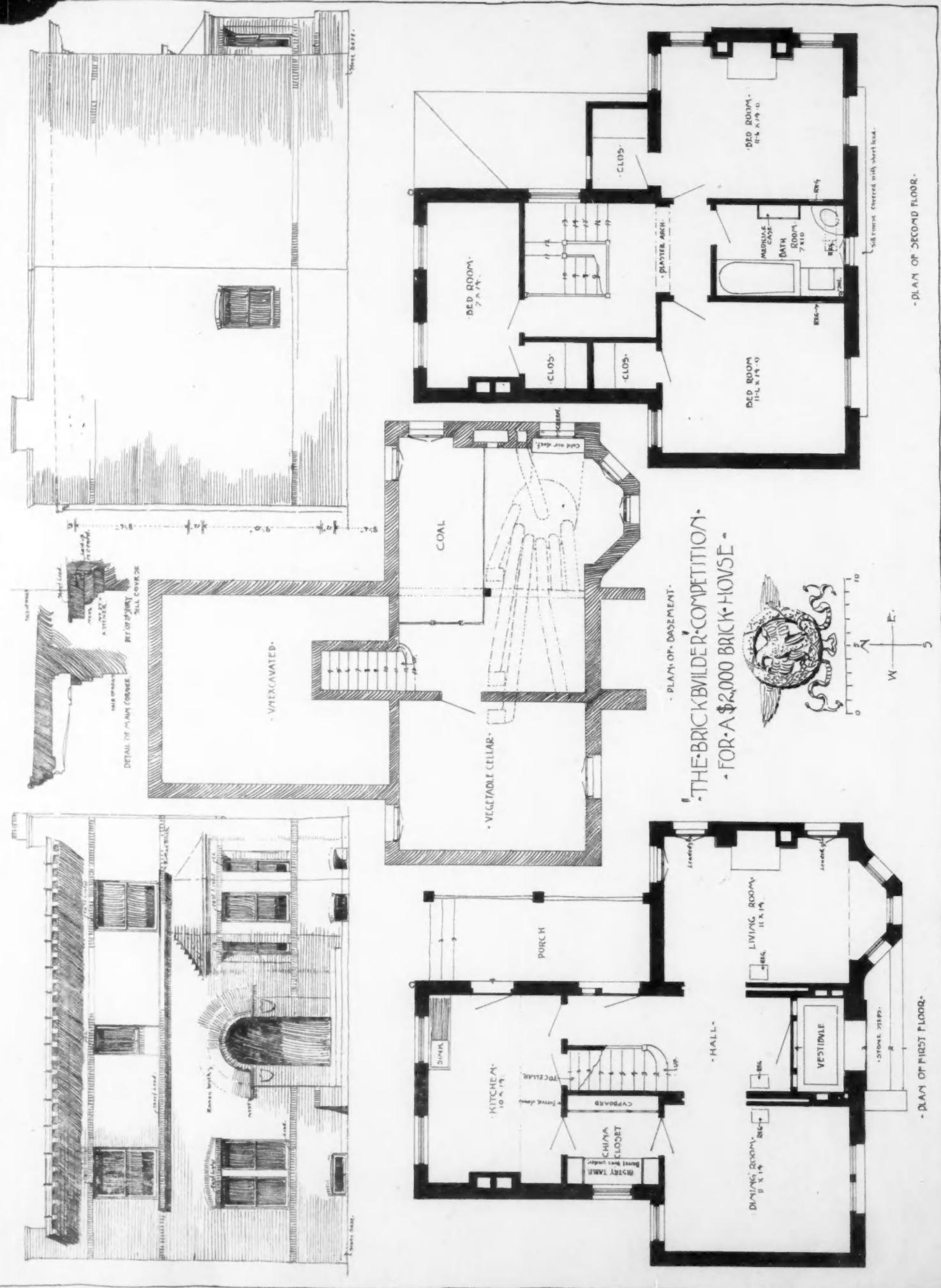
PLATE 83.



DESIGN BY STANLEY F. KADOW, MILWAUKEE, WIS.  
AWARDED PRIZE.

THE BRICKBUILDER COMPETITION FOR A \$2,000 BRICK HOUSE

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卷之三

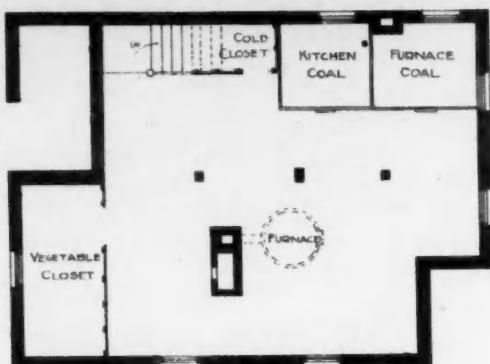
THE BRICKBUILDER COMPETITION FOR A \$2,000 BRICK HOUSE.

NUMBER COMPETITION FOR A \$2,000  
DESIGN BY JAMES C. GREEN, ST. LOUIS, MO.

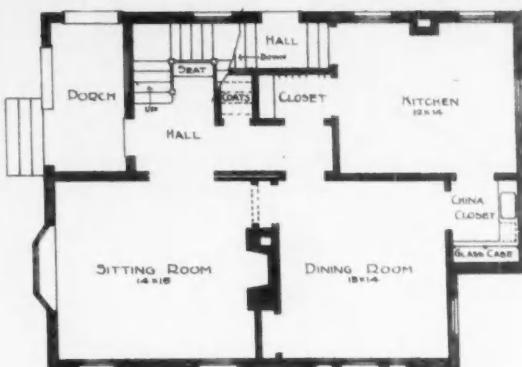
JOURNAL OF CLIMATE

# THE BRICKBUILDER.

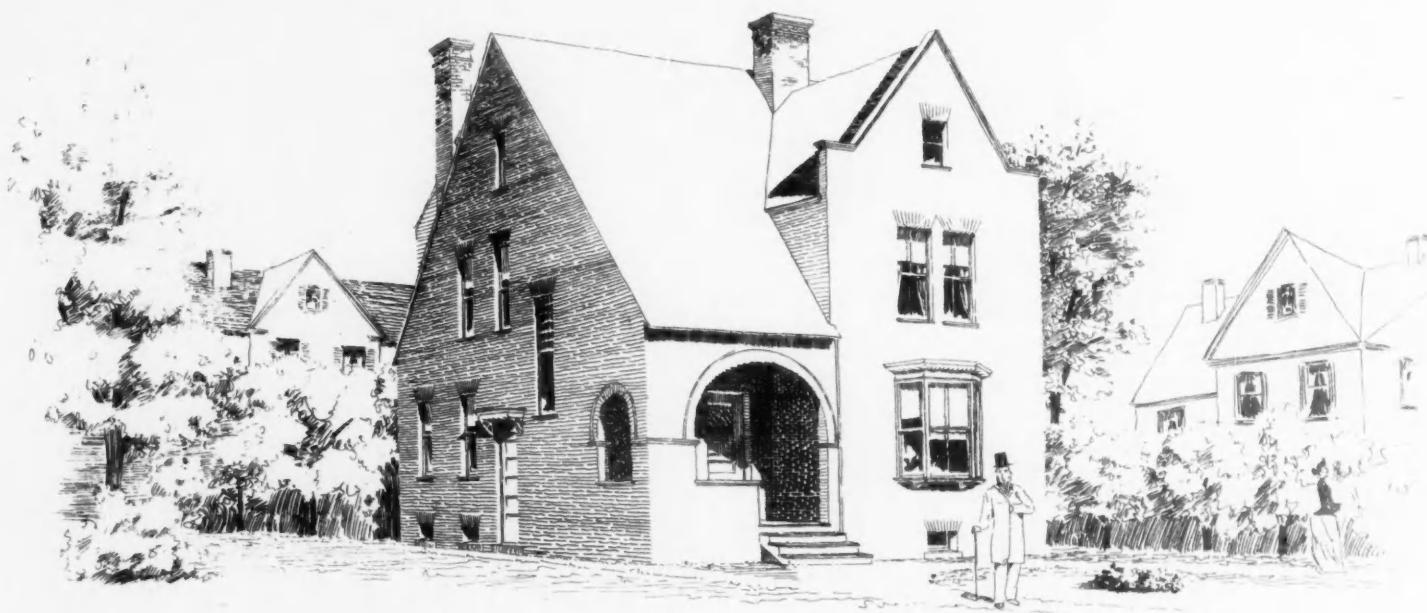
VOL. 1. Nos. 11 & 12.



BASEMENT PLAN



FIRST FLOOR PLAN

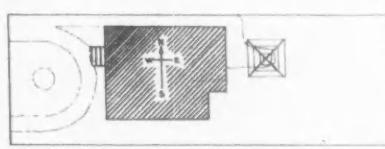


PERSPECTIVE FROM NORTH WEST

A  
CHEAP  
BRICK  
HOUSE

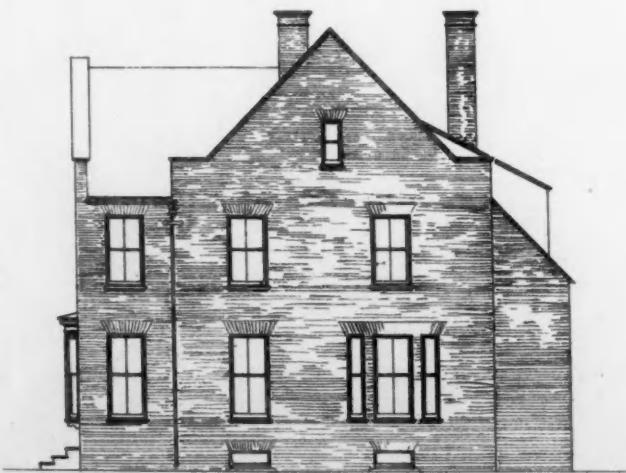


0 5 10 15 20 25 30 35 40  
SCALE

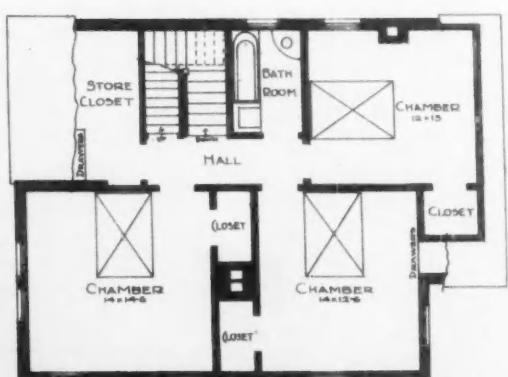


SCALE

BLOCK PLAN



SOUTH ELEVATION



SECOND FLOOR PLAN

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CHAS. HILL & SONS, LITH., 26 VINEY ST., N. Y.

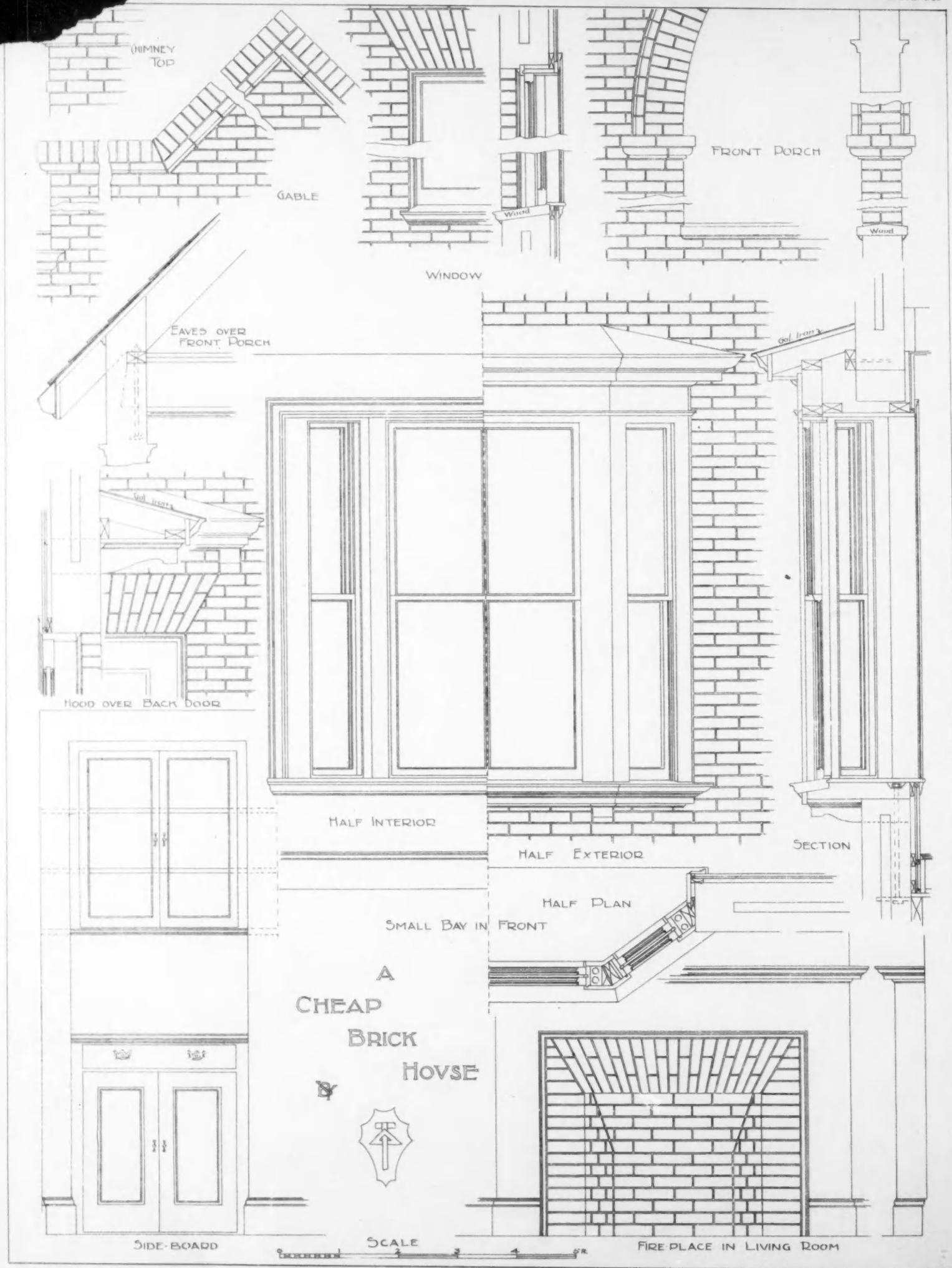
THE BRICKBUILDER COMPETITION FOR A \$2,000 BRICK HOUSE.

DESIGN BY WILL. S. ALDRICH, SOMERVILLE, MASS.

AWARDED PRIZE.

## THE BRICKBUILDER.

PLATE 86.



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## THE BRICKBUILDER COMPETITION FOR A \$2,000 BRICK HOUSE.

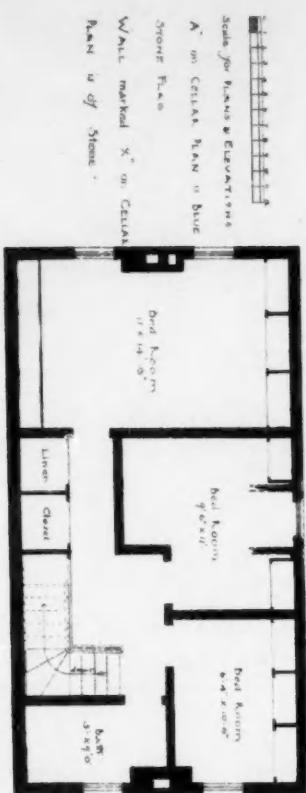
DESIGN BY WILL. S. ALDRICH, SOMERVILLE, MASS.

**AWARDED PRIZE**

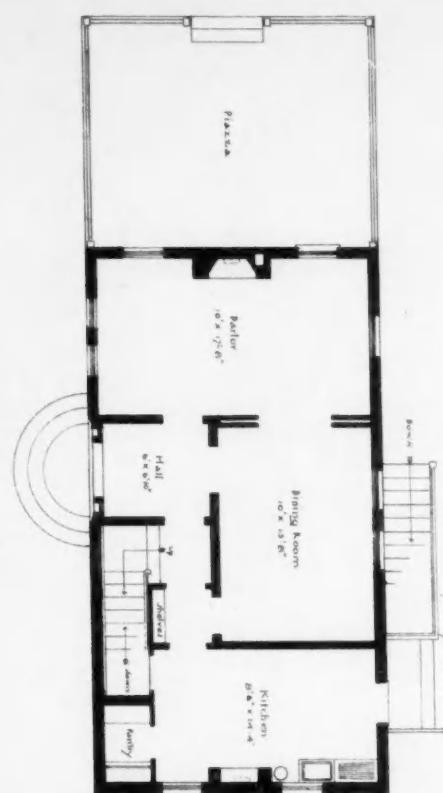
# THE BRICKBUILDER.

VOL. 1. Nos. 11 & 12.

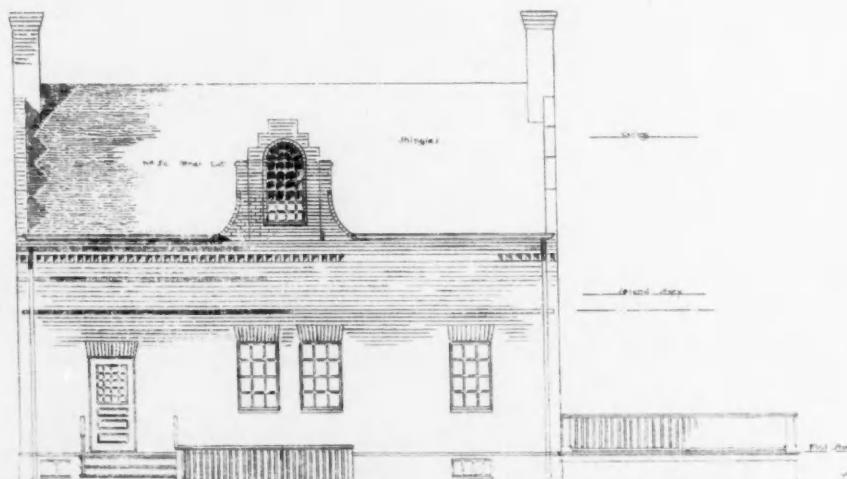
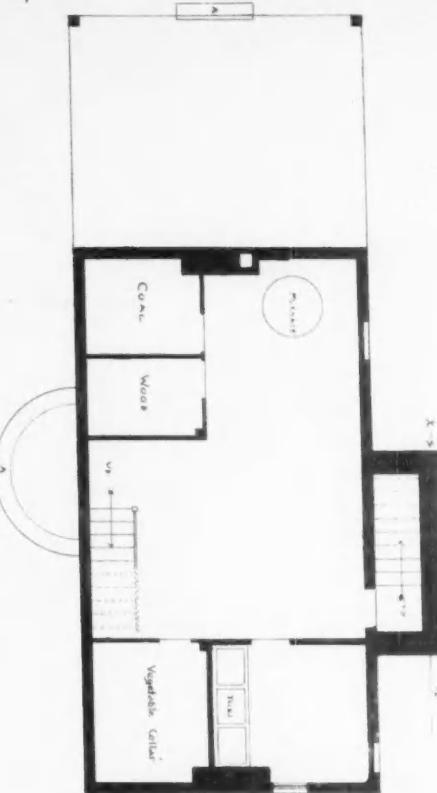
SECOND FLOOR PLAN



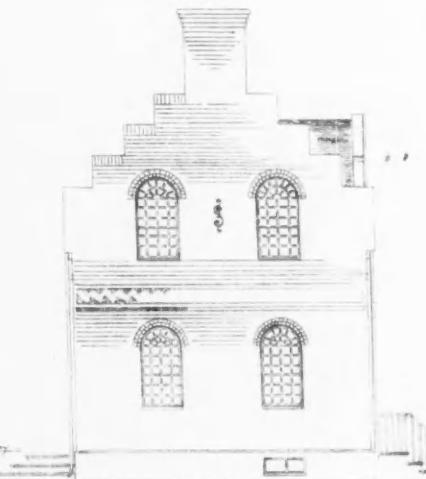
FIRST FLOOR PLAN



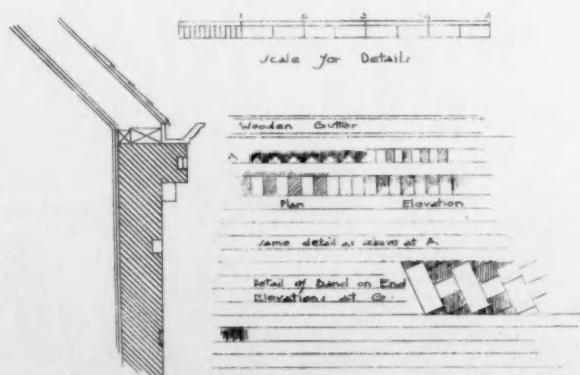
CELLAR PLAN



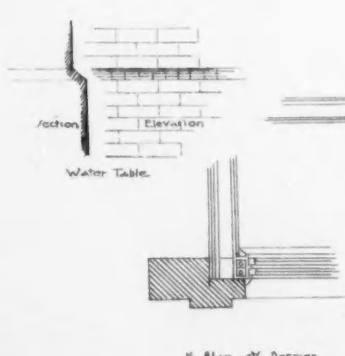
NORTH ELEVATION



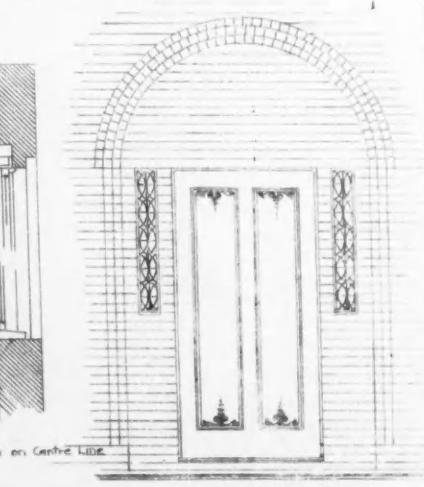
EAST ELEVATION



DETAIL of brick cornice.



SUBMITTED BY "PLAIN JANE"

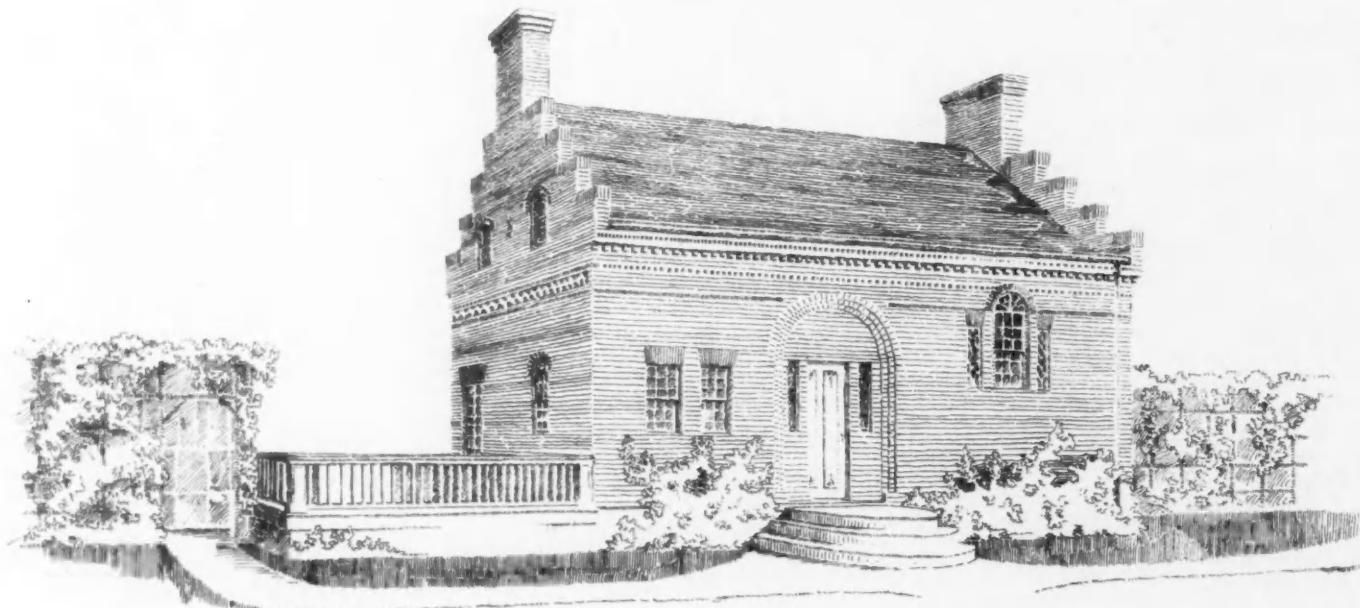
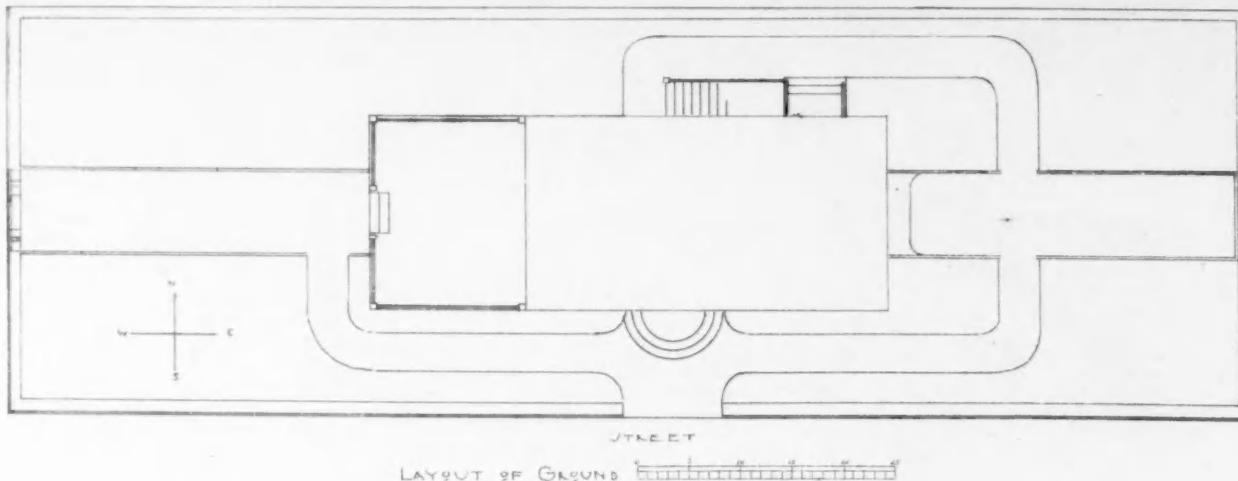


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THE BRICKBUILDER COMPETITION FOR A \$2,000 BRICK HOUSE.

DESIGN BY HARRY EDWARD PRINDEL, N. Y. CITY.

AWARDED PRIZE.



PERSPECTIVE VIEW

## SPECIFICATION NOTES

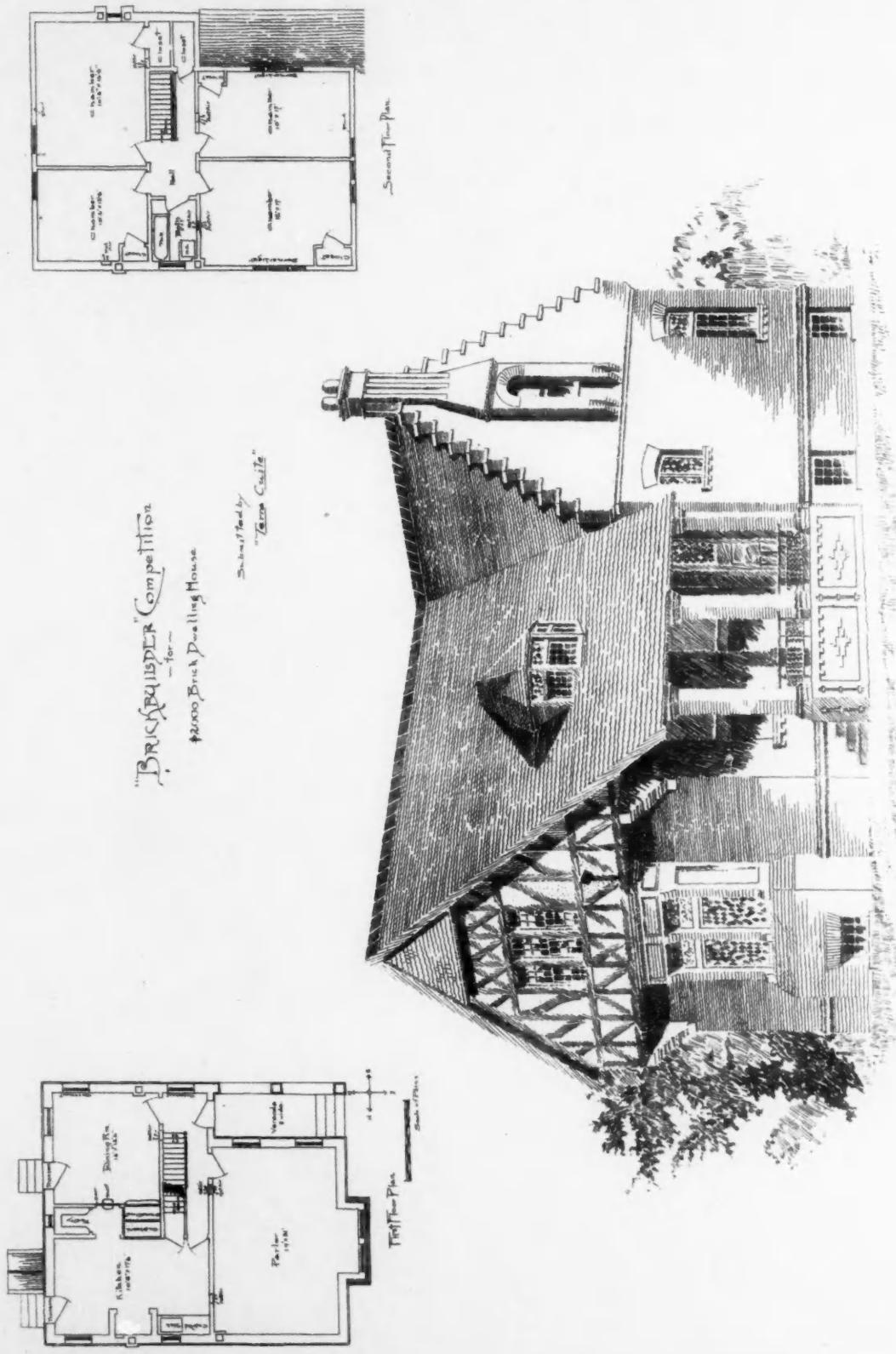
It was the intention of "Plain Jane" to design a house simple & homelike in character, of good but plain construction, & with such surroundings as would give it a feeling of retirement & rest. It is surrounded by a hedge as shown, which would be better replaced by a brick wall on the street sides, with simple gates: The Arches are designed in order to secure more retirement from street. Concrete Footings under all Walls, Piers, & Chimneys: Cellar floor concreted 3 thick: Good Floor to be laid in Vegetable Cellar: double floor in the Laundry: rough floor in Coal & Wood Bins: Wooden Tubs: Stairs to First Story well built, stout hand rail, no risers: Brick work throughout to be best hard burned ordinary brick: mortar of equal parts lime & cement: Terra Cotta & blue pipes: Blue stone cap to Chimneys: Steps in Gable cemented on top, with pitch for water: All rooms to have one heavy brown coat, & one coat of hard finish plaster: House to be well timbered throughout: beams 3" x 10", 16" o.c. rafters 2" x 6-16" o.c. Single Georgia Pine floors: Stud Partitions: Plain Trim: Stairs to 2<sup>nd</sup> Story of Pine, finished in hard oil: Balusters, square: Plain hand rail: Box Frame windows: Front Door finished in White: House to be heated by registers from Furnace: Hot & Cold Water in Kitchen, Laundry & Bathroom: W.C. & Basin in Bath also. Piazza to have stout hand rail & square balusters: Painted white: Wooden steps outside, front & rear, to be finished same as piazza. Galvanized iron Leaders:

SUBMITTED BY "PLAIN JANE"

# THE BRICKBUILDER.

Vol. 1, Nos. 11 & 12.

PLATE 89.



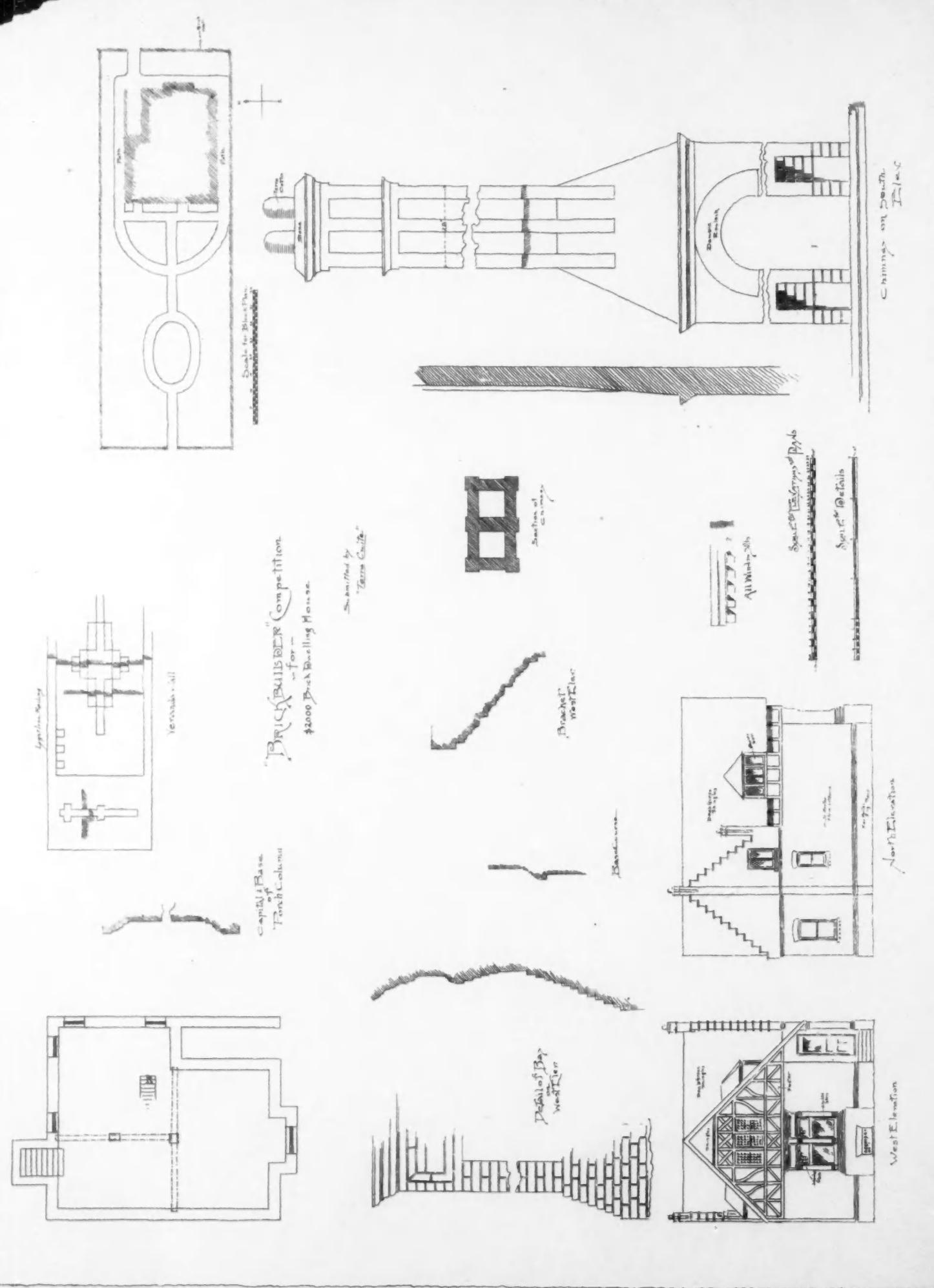
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THE BRICKBUILDER COMPETITION FOR A \$2,000 BRICK HOUSE.

# THE BRICKBUILDER,

VOL. 1. Nos. 11 & 12.

PLATE



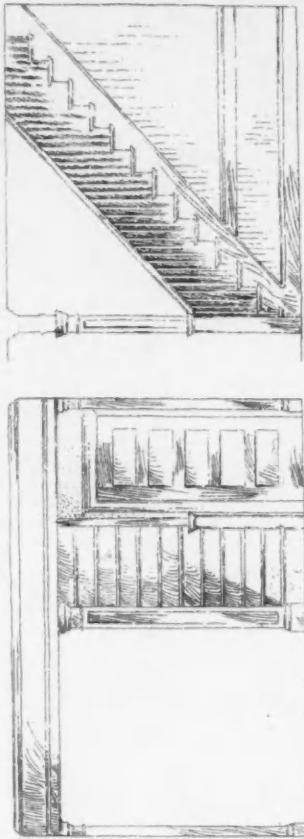
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## WILDER COMPETITION FOR A \$2,000

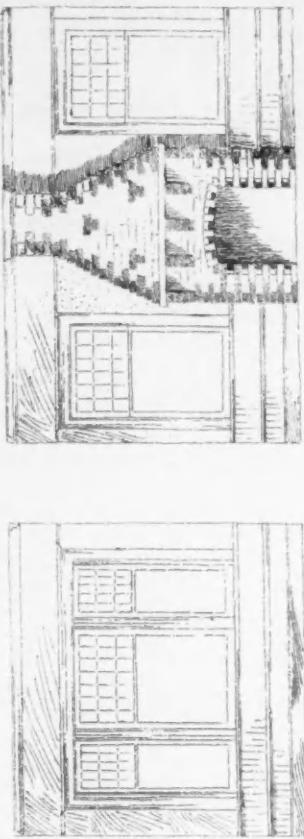
# THE BRICKBUILDER.

VOL. 1, NOS. 11 & 12.

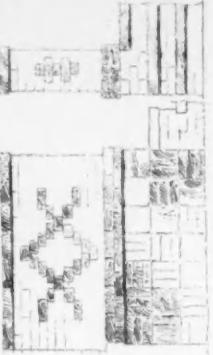
PLATE 91.



STAIRCASE IN HALL



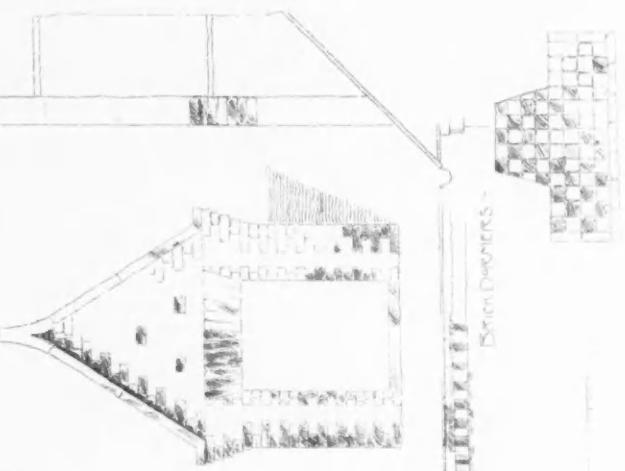
## PARLOR LOOKING TOWARD STAIRS~



NORTH SIDE OF PARK



INT. DAY



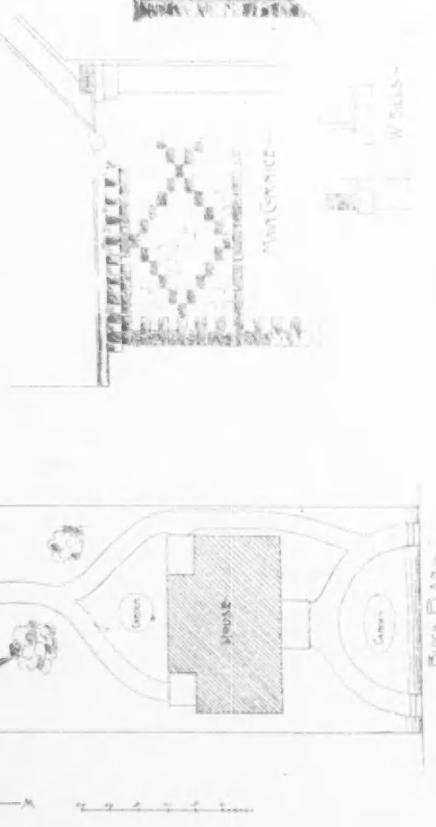
1448



TABLE 9. CORNERS OF HOUSE -



卷之三

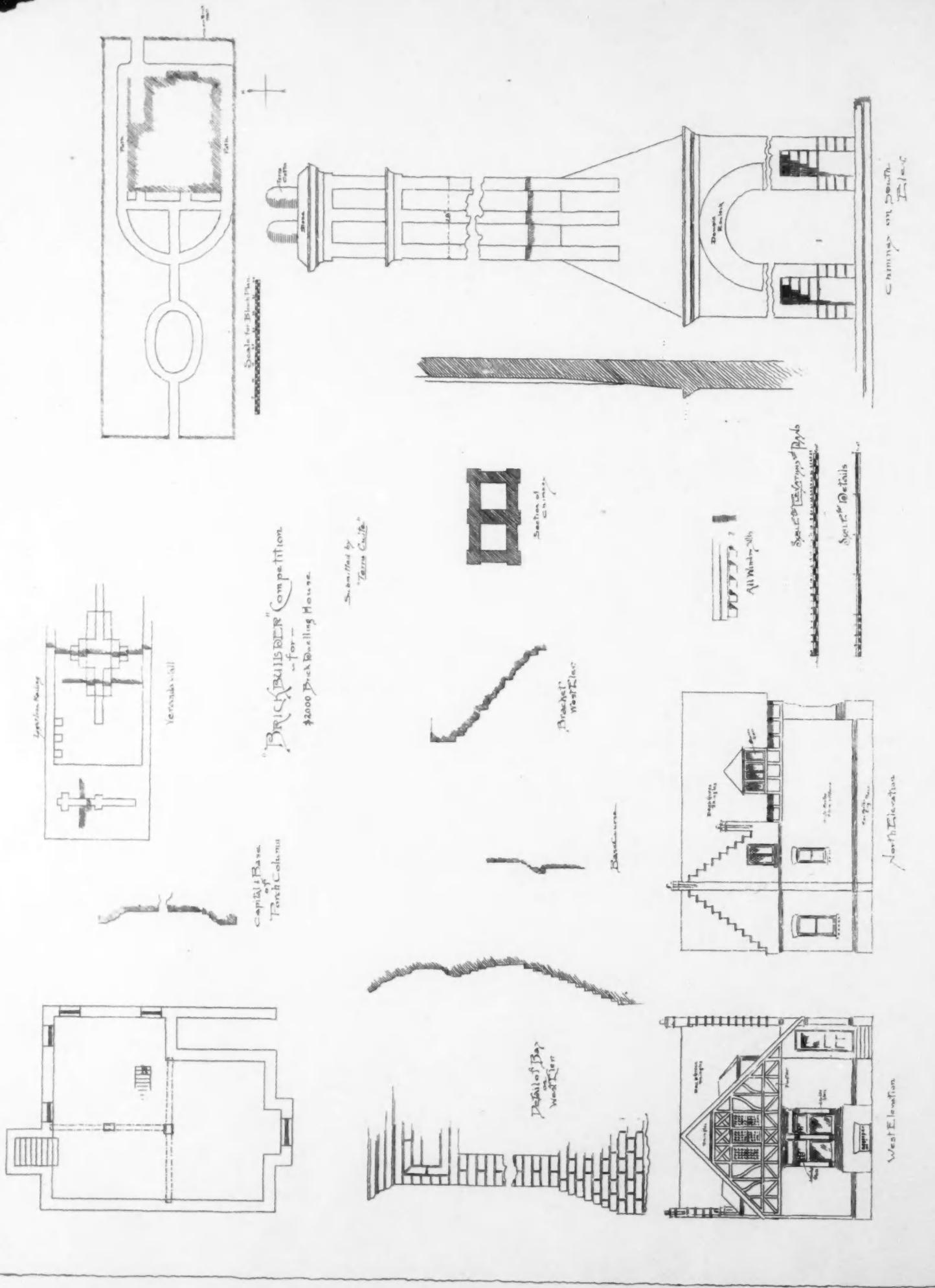


Block Plan

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# THE BRICKBUILDER.

# BrickBuilder Competition for \$200 Brick Building House.



卷之三

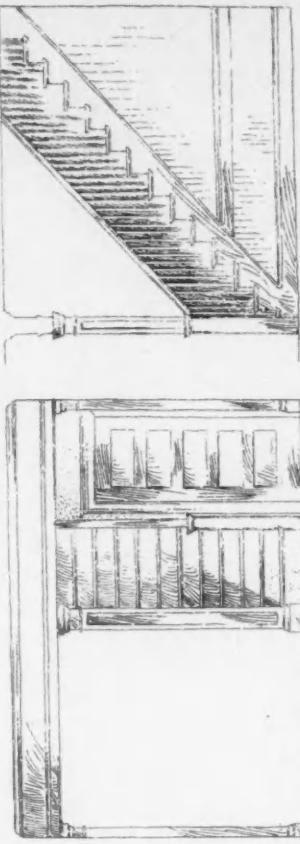
## THE BRICKBUILDER COMPETITION FOR A \$2,000 BRICK HOUSE.

卷之三

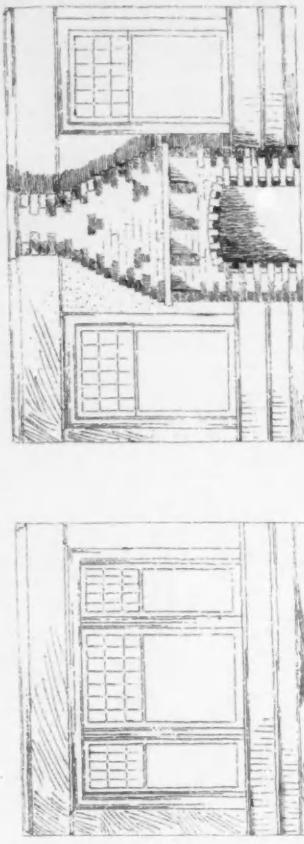
# THE BRICKBUILDER.

PLATE 91.

VOL. 1. Nos. 11 & 12.



PARLOR LOOKING TOWARD STAIRS~



DINING ROOM LOOKING TOWARD LAKE~



NORTH SIDE OF FIREPLACE

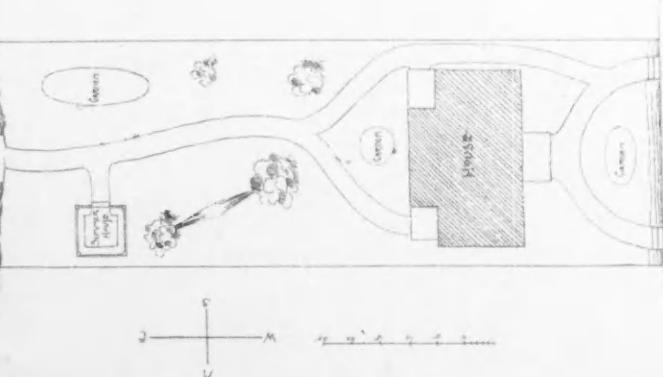
5' 4" 5' 4"



UNDERPINNING WATER  
TABLE AT CORNERS OF HOUSE~



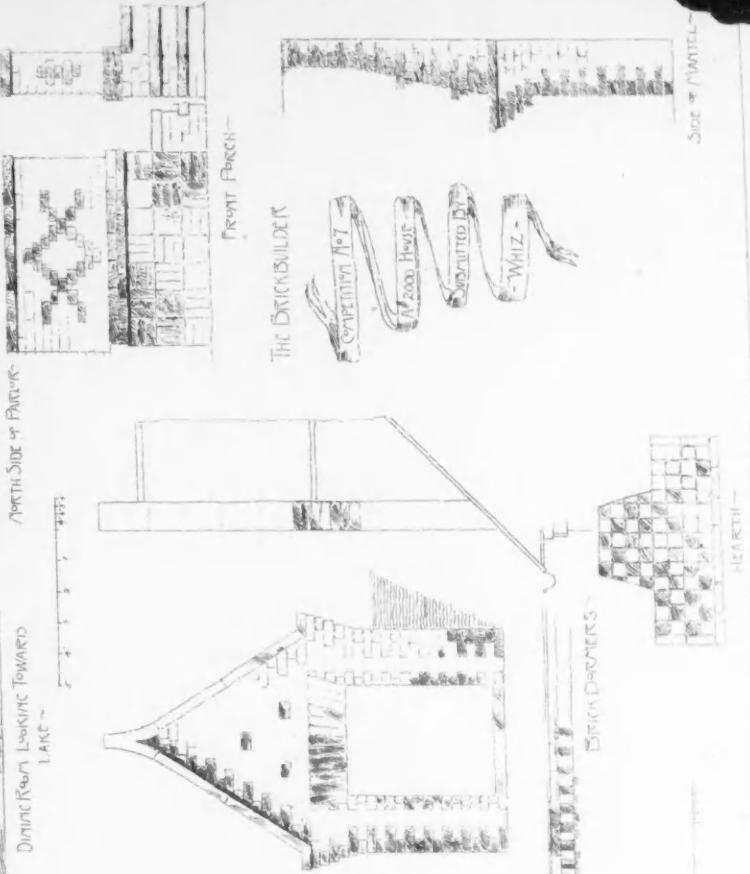
WINDOW OPENINGS~



BLOCK PLAN~

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THE BRICKBUILDER COMPETITION FOR A \$2000 BRICK HOUSE.



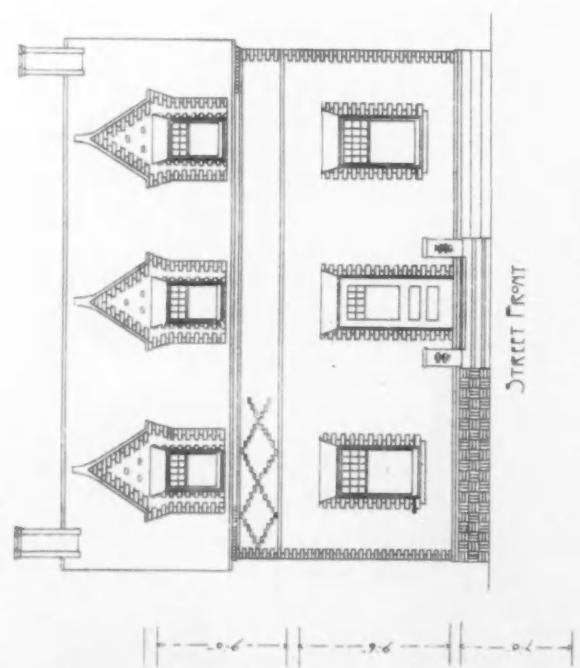
IRON RAILING~

SIDE OF MANTLE~

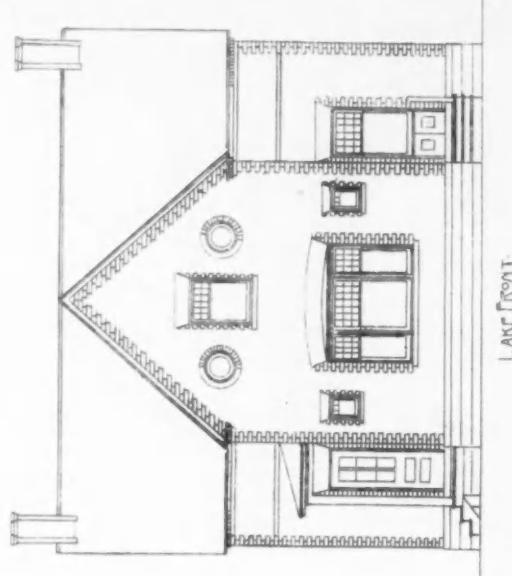
WALLS~

INTERIOR~

WALLS~



THE BRICKBUILDER  
Competition No. 7  
A \$2000 HOUSE  
Submitted by  
Whiz.



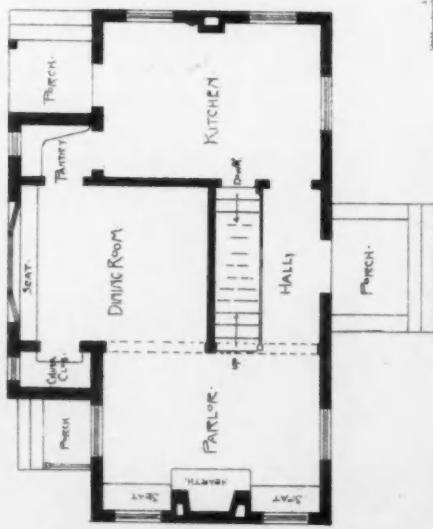
LAKE FRONT.

SPECIFICATION.

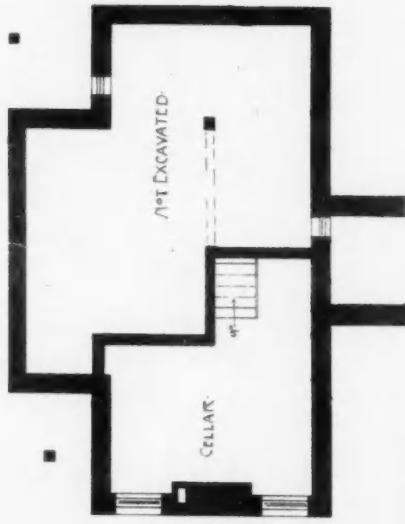
MASS. EXCAVATE FOR CELLAR ETC AND GRADE UP IN REAR TOWARD LAKE. FOUNDATIONS OF BEST LOCAL QUARRIED STONE LAID IN BEST CEMENT MORTAR. BLOCK WALLS OF SOFT LOCAL BRICK, EXCEPT PORTIONS SHAD DARK 11x14. DETAILS WHICH WILL BE OF HARD BURNED LOCAL BRICK DARK COLOR AND SUCH AS ARE FOUND NEAR THE FIRE IN KILN. ALL LAID IN BEST LINT MORTAR COLORED RED WITH TANTS KEPT BACK  $\frac{3}{8}$ ". CAMPFIRE. ALL TRADES BEST SPRUCE OR HEMLOCK. TRUSSES 2x9 AND 2x8. PLATES 2x8". STUDS 2x4". RAILERS 2x6". GIRDERS 6x8". FLOORS 2x4". 2x6" QUALITY PINE. WINDOWS & DOORS, SASH 1/4". DOORS 1/2" OUTSIDE, 1/2" INSIDE. INSIDE FINISH FIRST QUALITY WHITE PINE OR CHESTNUT. TRIM 1/2" x 4 1/2". PICTURE MOLDING 1/4" (BASE 9" HIGH). STAIRS AS PER DRAWINGS. STAIRS 11" QUALITY AND SHEET. (WALLS THICK).

PAINTER. INSIDE FINISH IF PINE PAINTED 2 COAT OATS OR WHITE LEAD AND OIL IN ANY COLOR, BUT IF CHESTNUT TO BE FILLED AND THEN TO HAVE 2 COAT OF VARNISH.

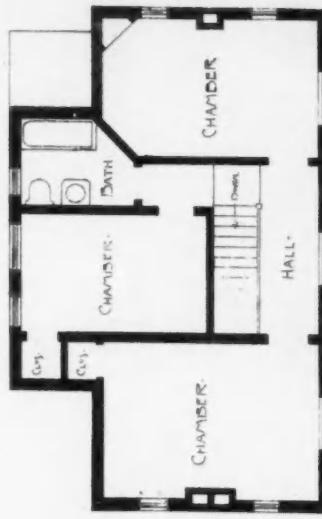
COST PRE-ESTIMATE:  
EXCAVATION. \$75.  
STONE. 50.  
MASON. 78.5  
Carpenter & Painter. 60.77.  
1987



PLAN OF FIRST FLOOR.



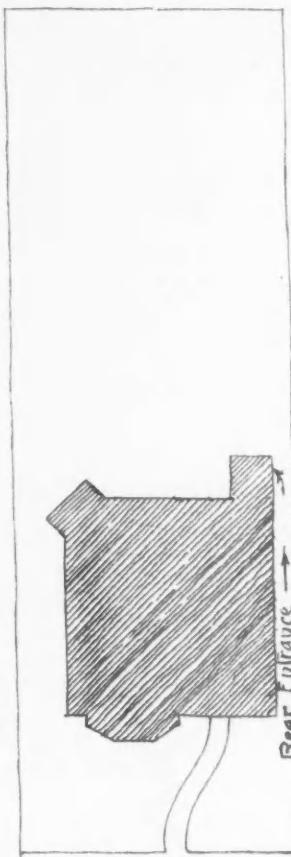
PLAN OF SECOND FLOOR.



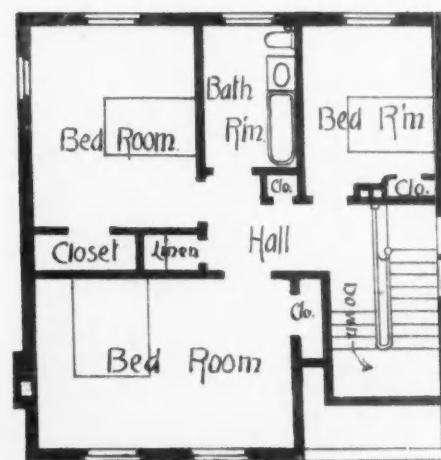
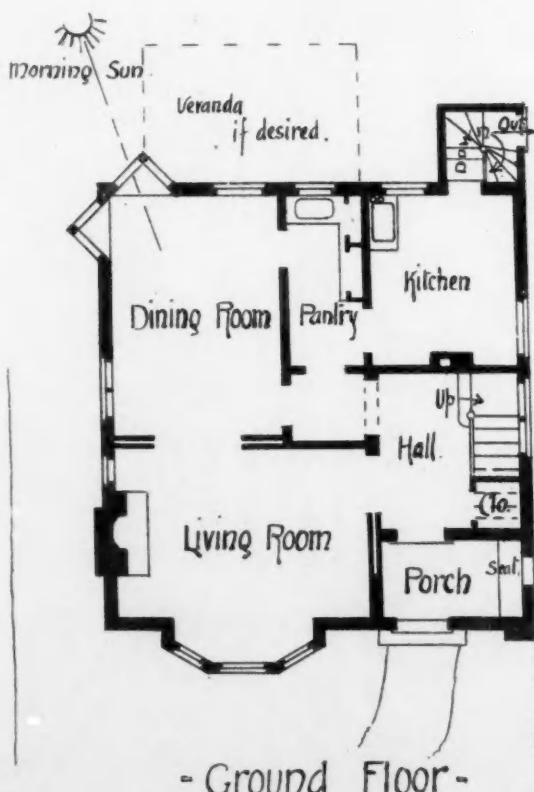
PLAN OF CELLAR.

"BRICK-BUILDER"

COMPETITION N° 7



Block Plan.



Scale 1 2 3 4 5 10 15 20 25 ft.

"Demos"

## THE BRICKBUILDER.

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PLATE 94.

- "BRICK-BUILDER" -  
COMPETITION N° 7 -

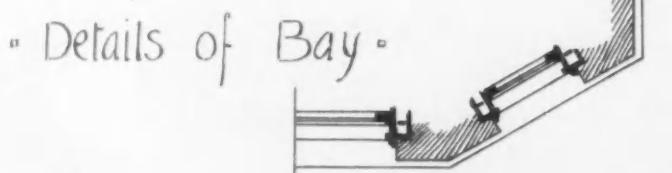
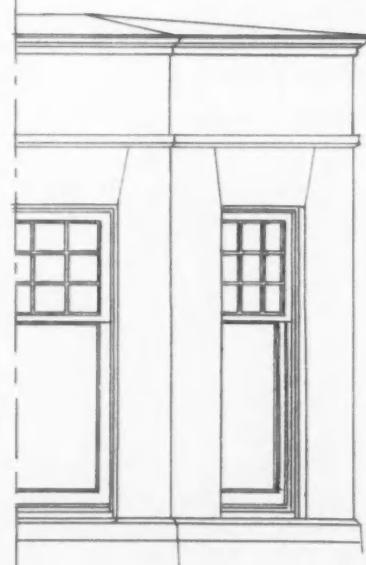
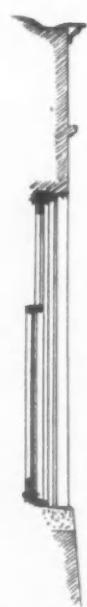


• East Elevation •



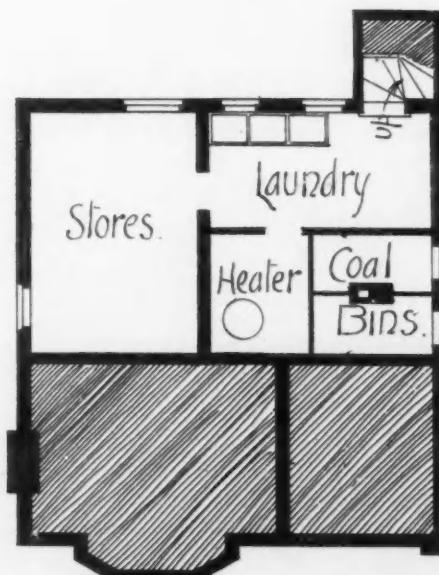
• North Elevation •

Scale for Plans and Elevations



### Scale for Details

12. Lo.



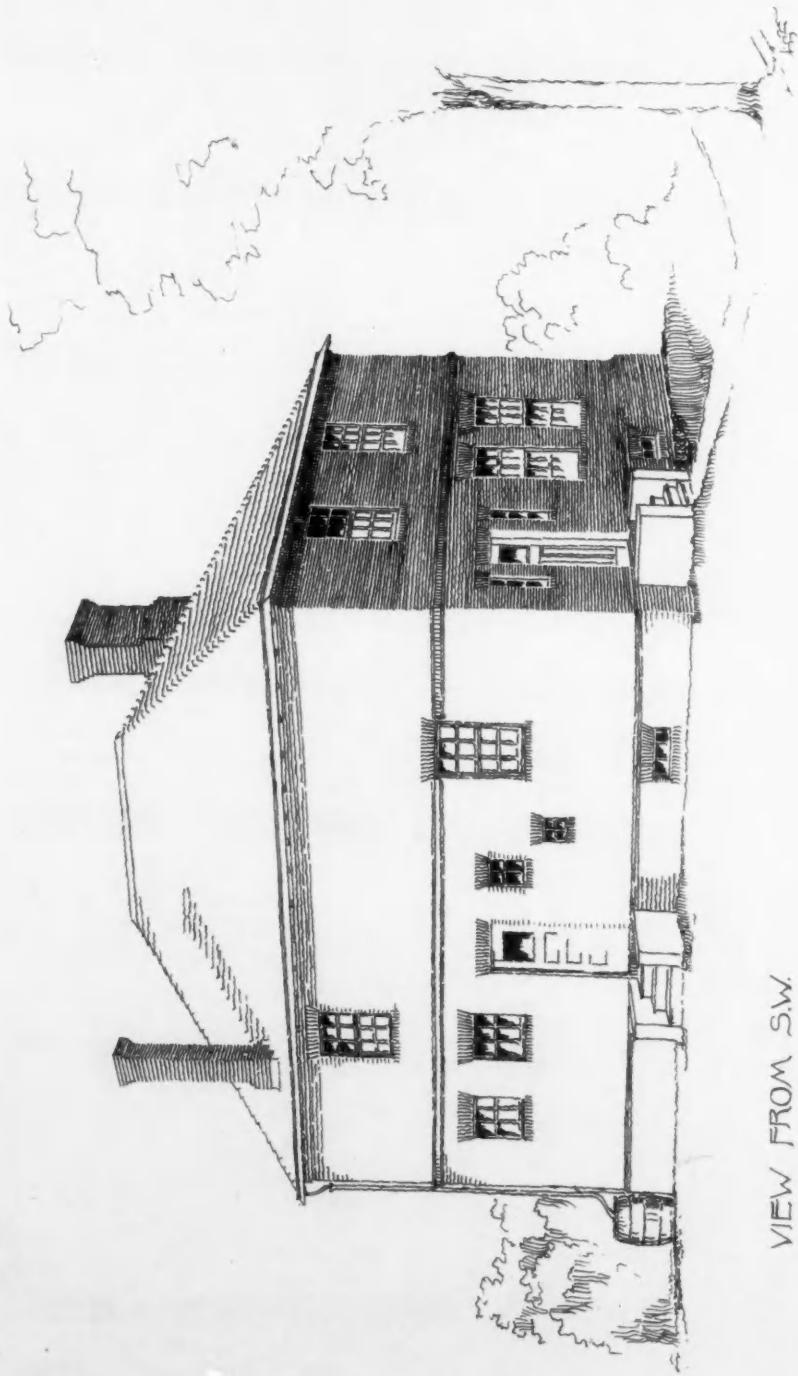
## • Cellar Plan •

## “Demos”

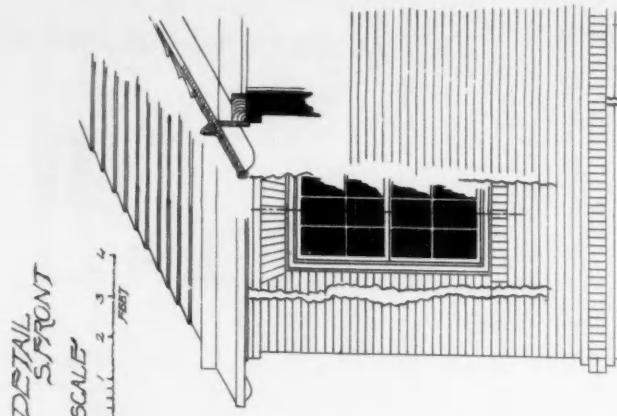
## THE BRICKBUILDER.

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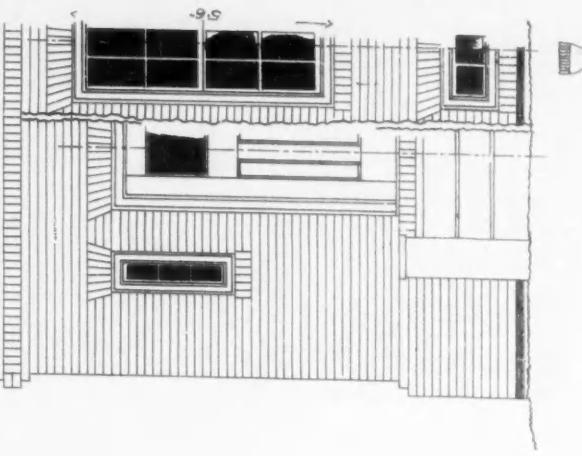
PLATE 95.



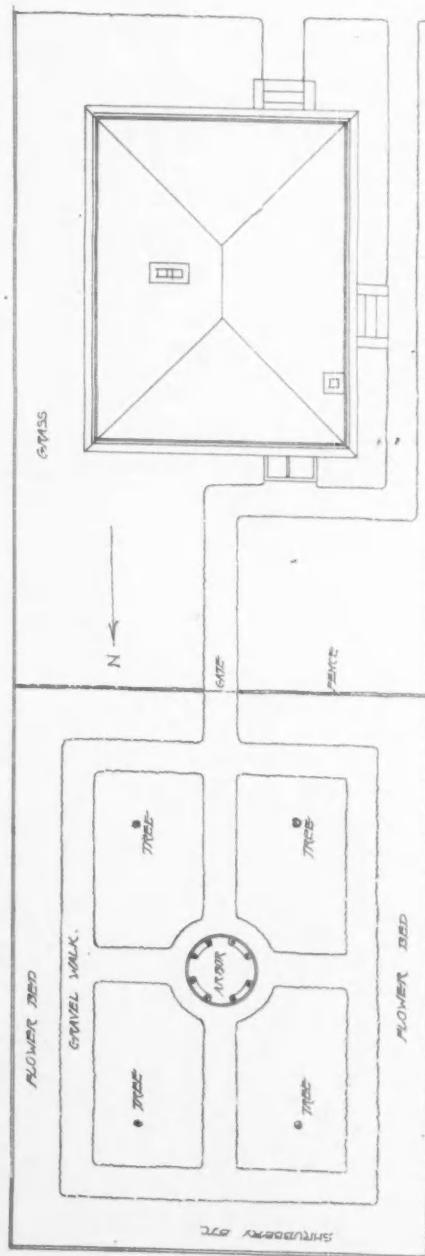
## VIEW FROM S.W.



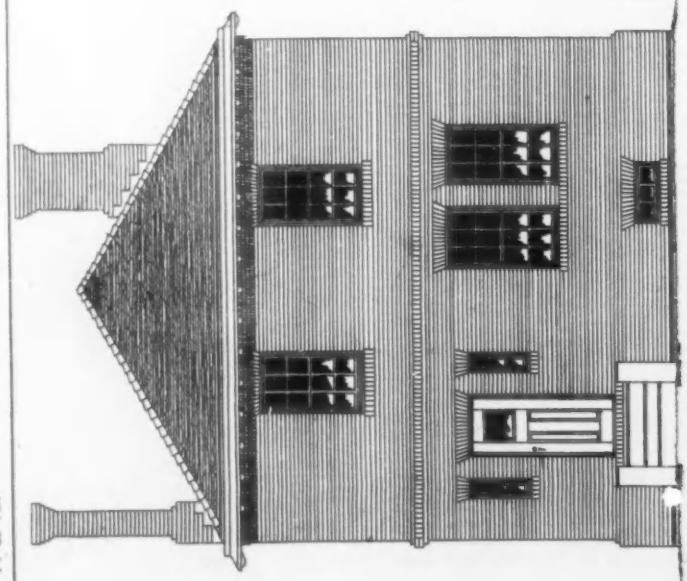
DETAILED  
SURVEY  
SCALE  
1 2 3 4



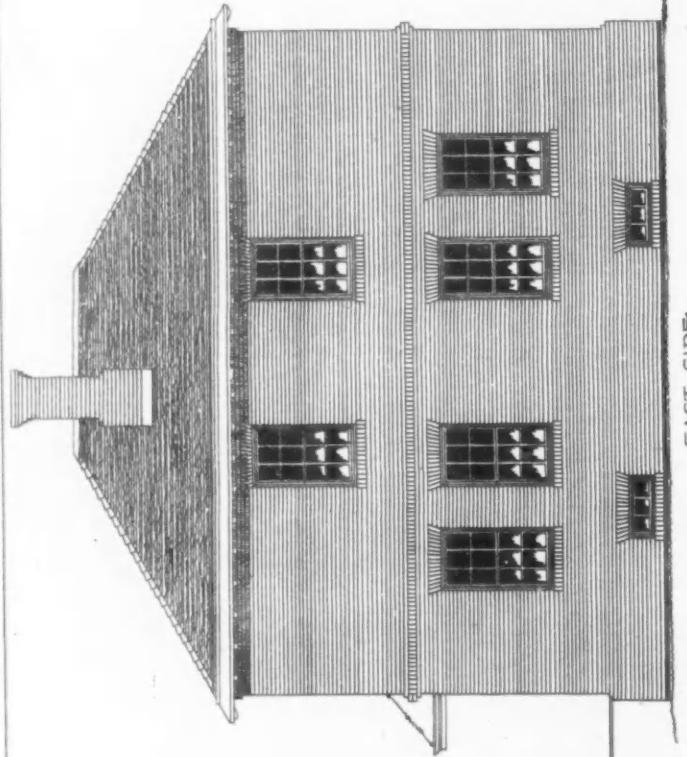
PLAN OF GROUNDS  
SCALE 1:2467890  
LAWNS AND PLACES



Copyright 1992. By The Board of Regents of the University of Wisconsin.



SOUTH FRONT.



EAST SIDE.

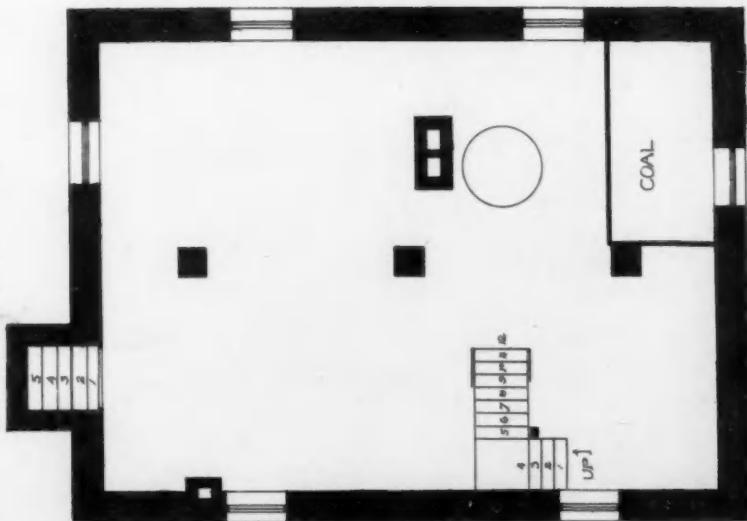
A BRICK HOUSE <sup>70'</sup>  
\$ 2000 <sup>00</sup>  
EXCLUSIVE OF FURNACE AND  
PLUMBING.

NOTES:-

EXTERIOR  
WALLS COMMON BRICK IN  
WHITE MORTAR, SILLS  
STRUNG COURSES, AND  
CHIMNEY TOP IN CEMENT  
WINDOW FRAMES GREEN  
WALLS, PAPER, PAINTED  
ROOF, SANGLES STAINED  
GREEN

INTERIOR FINISH  
• HALL, A PARLOR, WHITE WOOD  
• 2ND STORY, WHITE PINE.  
• KITCHEN, WHITE WOOD.  
• OTHER ROOMS, WHITE WOOD.  
• NATURAL FINISH NO PAINTED  
TO BE USED.

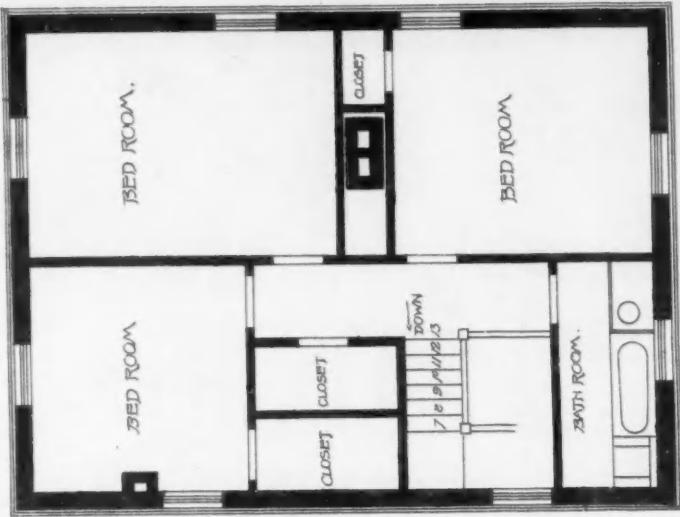
SCALE  
1' 2' 3' 4' 5' 6' 7' 8' 9' 10' 11' 12' 13' 14'



CELLAR PLAN.



1ST FLOOR PLAN.



2ND FLOOR PLAN.

San Zeno are, to my mind, some of the most beautiful I have seen. The arches are of brick, pointed on two sides of the quadrangle and round on the other two, and on one side is a small projecting arcade; they are without mouldings, and are supported on coupled columns of red marble.

The areading of San Fermo Maggiore may also be mentioned; and strolling along the narrow streets of the city numerous interesting bits of brickwork will be discovered. There is one special characteristic of the treatment of brick and stone in Verona, namely, the introduction of narrow courses of bricks between the arch stones and the plain walling, or between two rings of voussoirs. This serves to accentuate the arch and to keep it distinct from the main body of the wall, and is an effect that might well be imitated in our own buildings. Venice, which of course has a charm all its own, is not very rich in examples of brickwork; or rather, perhaps, I should say that the examples are not of such excellence as in other Italian cities. The church of the Frari is one of the most interesting examples, and there are one or two early campaniles in brick, San Giacomo del Rialto being the best. San Giovanni e Paolo, or Zanipolo as it is called, has an elaborate cornice. It would be both easy and interesting to devote some time to the description of the Italian cities such as Brescia, Mantua, and especially Cremona; but these would almost demand an evening for themselves. There is, however, one Italian city which must not be passed over, as it is built entirely of brick—I mean Bologna. The first view of its heavily arched streets is undoubtedly somewhat depressing, but the student of brickwork will find any number of most interesting details. The magnificent Church of San Petronio is almost entirely of brick both inside and outside, and is most impressive from its grand proportions and the excessive simplicity of all its details. There can be little doubt that this church exercised considerable influence over Street, as is shown in some of the late churches which he built. But it is for its domestic work that I think Bologna most interesting, as it shows us with how little trouble and expense we can increase the architectural effect of our plain brick buildings.

In our own country, after the Roman occupation terminated, very little seems to have been done in brick until the fifteenth century, although there is one building—Little Wenham Hall, in Suffolk—which dates from the end of the thirteenth century. The bricks here are interspersed with stone and flint courses, and the bricks are of widely different shapes and sizes, and when I visited the building a few years ago I came to the conclusion that it is very probable the bricks were not made purposely for the building. In the eastern counties bricks were largely used during the fifteenth and following centuries, one of the finest examples being Layer Marney Hall, Essex, which has been frequently illustrated. Who was the architect of this building is not, I believe, known, but he was certainly a man of considerable ability, and, I am disposed to think, familiar with some of the Italian terra-cotta work, as not only in the main building, but in the outbuildings also, there are several charming little bits of moulded brickwork. Sutton Place, near Guildford, is a beautiful example of brickwork; but here the influence of Italian Renaissance is manifest, and there can be little doubt that Italian workmen were employed on this building. The detail is pure, the ornament refined.

In Queen Anne's reign English brickwork was under the full domination of the Renaissance, and truly wonderful was the result. As far as workmanship goes, it is admirable. Pilasters, cornices, panels, swags, bunches of fruit and baskets, and, in fact, every imaginable detail, were formed of cut bricks, with an ingenuity and at a cost of labor that almost excites one's pity. I quite admit the charm of some of the older and simpler forms of this style that are met with most frequently in old country towns where age has given a mellowness to the work, and where nature has so often added to the picturesqueness by the creepers which have overgrown the exterior; but of the later developments of the original style and of the modern imitations of it, what can we say? I am aware that I am on somewhat delicate ground here, and I feel perfectly that my own opinion is a mere personal matter and worth no more than any other person's; but I can only say that much of the modern brickwork in imitation of the Queen Anne style fills me with horror and detestation. When I see pilasters tacked on to a front which not only have an exaggerated entasis at their sides, but come bellying out in front like the sails of a ship, they remind one of the fable of the frog and the bull, and the bricks seem swollen with conceit at having attained to a form utterly foreign to their nature; and it is this, rather than the ugliness, which I so strongly object to.

Brick is a hard material moulded and baked in a kiln, and moulded bricks seem to me perfectly legitimate; but surely the original baked surface is the most fitting to resist the weather; and if you go and rub and cut all the surface off, and then give the material a shape and form utterly foreign to its nature, you are completely reversing the practice of the mediæval builders, who have left us the most magnificent examples of their skill, and who invariably gave to each material they employed the ornamental treatment which it was best fitted to receive. Much of this modern treatment of brickwork seems to me on all fours with, and just as reprehensible as, the practice which prevailed in the early part of the century in London houses, where we find a small porch carried by what appears to be a solid stone column of the Doric order, but which turns out to be constructed of wood bent to a circular shape and kept there with an infinity of trouble. In each case the material has been tortured, and bears on its face the imprint of its suffering. And this brings me to the concluding portion of what I have to say to you this evening, which relates to the actual materials with which our brickwork is constructed—the bricks and mortar.

I am not going to take up your time with any description of brickmaking, except to point out the danger of using bricks pressed into shape by heavy machinery. My experience is that these pressed bricks, though having a fine smooth face, are very liable to flake and spall off at the angles, and I believe the reason to be that the outer layers of the clay in the brick get more closely compressed than the inner ones, and consequently the brick itself is not homogeneous. Another drawback to machine-made bricks is that machinery has enabled far inferior materials to be employed than was the case when only hand labor was in use, and consequently small pebbles are ground up with the clay and have a tendency to cause the brick to blow. The following are the characteristics of a good brick: 1. It should be regular in shape, so that when built into the wall the pressure over its whole surface shall be equal; 2. It should be tough and not brittle; 3. It should have a clear metallic ring when knocked gently against another brick; 4. It should show a homogeneous surface when broken; and 5. It should absorb only a small quantity of water. This last is a most important matter, and although a brick can be tested for this with great ease, it is too often neglected. All bricks, of course, absorb some water, but the amount should not exceed from 10 to 15 per cent of the volume of the brick, and those are the best bricks which absorb water slowly, because when built into walls bricks are subjected to intermittent wettings only, and not to continual immersion in water. The same thing applies to stone, but I am aware of no experiments which have been made to test, *not* the total absorption, but the rate of absorption of water by bricks and stones.

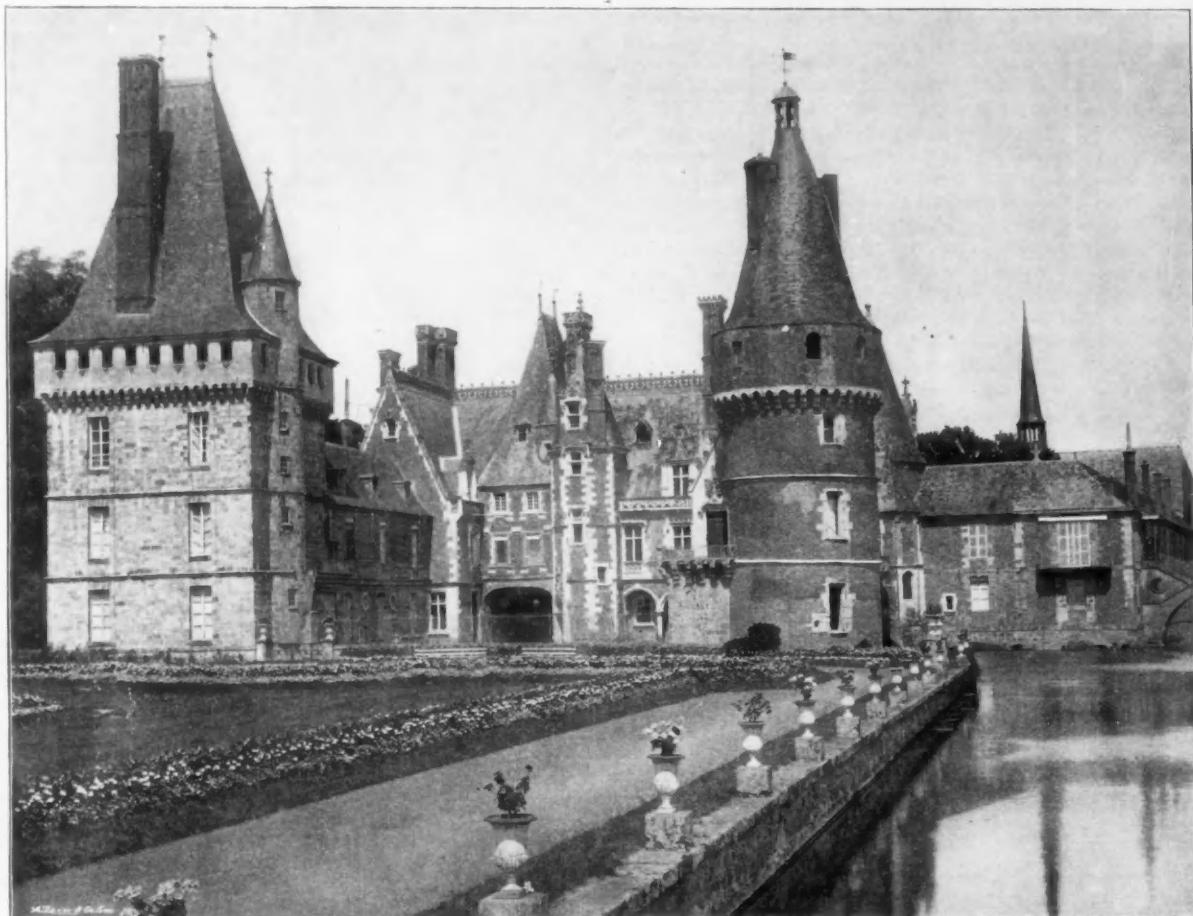
There is one little practical matter that must not be overlooked in brickbuilding, and that is, if you have different bricks for facing and for the main body of the wall, care must be taken that the two kinds are not very different in thickness, otherwise the discrepancy will have to be made up in the mortar joints, and you will get inequality of pressure that will certainly result in cracks. The crushing strength of bricks is an important matter, but you must bear in mind that the crushing strength of a brick and of brickwork are two very different things. The figures given for the crushing strength of bricks vary in different text-books. In the third volume of *Building Construction* the crushing strength of a London stock brick is given at 128 tons. This is certainly a very gross error. In order to get some fresh information on this point, my friend Professor Unwin, of the technical Institute at South Kensington, was kind enough to test some bricks for me a few days ago, and I witnessed the experiment. A Leicester brick (Ellis, Partridge & Co.) did not even crack until a load of 63 tons was placed on it, and it crushed just under 68 tons, which was equivalent to a load of 245.8 tons per square foot. A hard Coventry brick, which was cut in half before testing, cracked with a load of 29½ tons on the half of it, and crushed just under 32 tons, equivalent to a load of 217.7 tons per square foot. An average specimen of a London stock full size cracked at 24 tons and crushed at 34 tons, equivalent to 125 tons per square foot, and this may be taken as a fair average for this kind of brick. I thought it would be interesting for you to see how a good material, whether brick or stone, crushes, and I have therefore brought the remains of one or two of the bricks. A bad material breaks up on all sides, a good one takes a pyramidal wedge-shaped form on top and sides, as you see. The hardest brick Professor Unwin has tested was a blue Staffordshire, which only cracked under a load of 107 tons, which is equal to a load of

## THE BRICKBUILDER.

385 tons per square foot. A 14-inch wall carried 68 feet high, which is, of course, higher than would be safe, would exercise a pressure on the lowest courses of about  $3\frac{1}{2}$  tons per square foot, so that, you see, there is very little danger of the bricks themselves crushing; but the interposition of the mortar joints in brickwork

makes a vast difference, and you ought not to calculate as a safe load on brick piers more than about 3 tons per square foot in mortar and 5 tons in cement, and this is approximately about one tenth of the crushing weight.

JOHN SLATER.



By Permission of The Clay-Worker.

## THE CHATEAU OF MAINTENON.

Most of the chateaus of France are of stone. Stone was the material which could be taken out of the ground and be readily formed in the shapes required in building structures. A great deal of the stone of France is exceedingly soft when taken out of the quarry, so that by little physical effort it can be easily shaped to conform to the requirements of the architect and artist. However, in some instances, we find among the best structures of early times a liberal use made of brick. In the chateau which is presented herewith, we find brickwork playing an important constructional part. The stone is used decoratively, yet brick is used to secure color and general form, and the result, as we see in this photographic print, which is made from a chromatic plate, shows the color values or color qualities of brick as related to stone and other material. Just what is meant by color values may be illustrated by the flowers in the vases along the wall. While the colors of the flowers do not show, the relative color values do show; thus it is in the brickwork, the stonework, and the slate that we have in this photograph, an exhibition of the color qualities or the color values as the different materials are related one to the other. The liberal use of stone in this structure illustrates clearly enough that brick was selected because of its artistic value rather than through absolute necessity. No advocate of brick building can hope to secure the use of brick as a building material excepting

for good and sufficient reasons. In a country far removed from the brick market, the effort to secure the use of brick material when stone is at hand would not be commensurate with results. Yet in this case it would be a good deal easier and quite as cheap to get stone as it would be to get brick building material.

We have said that stone in this structure was of a character to admit of its ready use in a decorative way, because it was soft, and for that reason readily fashioned into the forms which come to the mind of the artist. In our country we have no stone which lends itself so readily to the hand of the artist as does the stone of France. However, as far as enduring qualities are concerned, we have stone which is superior. On the other hand, our knowledge of the use of clay as a building and decorative material is such as to allow us to use clay products in the same artistic way, in the same decorative manner, and with the same freedom as did the artists and architects of France in handling their soft stone.

Stone with them was as plastic to the mind as is clay to the hand of the American artist. It must be borne in mind that in order to get artistic work in brick or other forms of clay, that it must be done by the artist. The artist must be the directing forces. It must be his hand or his mind which acts directly upon the building material, and hence produces artistic results. Handicraft if necessary. Handicraft is not enough. It is to the interest of

every brickmaker in America that artistic talent be developed looking to the handling of clay products. The material which best lends itself to the hand of the artist, and the material which receives the most artistic handling, is that which will receive the best patronage from the people. There is nothing which pays so well as the artistic handling of any natural material. It adds more value for the investment than can be secured in any other way. We can illustrate this when we bear in mind that raw material of any kind does not cost relatively a great deal of money. Yet, when put into attractive forms through the direction of artistic minds, it takes to itself the value proportionally larger in excess to the difference in actual investment. The large profits are represented by the difference between the mere handicraft, mere constructional form, and artistic form.

American architecture will develop itself through the medium of clay. There can be no doubt about this. The tendency in stonework is in the wrong direction. Stone carving is done by stone cutters, not by stone artists. Artists in stonework are rare. In fact, the difference between a stone cutter and a sculptor in doing decorative architectural work is not recognized in the stone yards of America. A man who is clever with his tools and can get decorative work has the opportunity of doing the work which should otherwise be assigned to an artist. In nearly every terra-cotta manufactory of America one finds modellers who are possessed of the artistic training and artistic enthusiasm which is necessary to the highest results. The best work from an artistic standpoint which has been done in America during recent years has come from the clay-worker. We have Frenchmen, Italians, Germans, and Englishmen, in whom have been cultivated the artistic instinct, and who have directed their attention to the modelling of clay in artistic forms, and because of the acquisition of such talent in this field, the statement as made is unquestionably true.

We have stated before that the stonework of France as handled is terra-cotta construction. Anything which is built in stone in that section can be constructed in terra-cotta. It is terra-cotta construction rather than stone. The stone is in small pieces because of its structural qualities, and, for that reason, the forms which are shown in this photograph all lend themselves naturally and properly to terra-cotta forms. — *Clay-Worker.*

## CORRESPONDENCE.

### GLAZED OR ENAMELLED BRICK FOR KITCHENS.

In our October issue, P. D. Reedy, M. D., of Elyria, Ohio, inquired as to what material could be used to advantage for finishing the interior of a kitchen. Enamelled bricks are satisfactory in every way, and are often used. Many brands of enamelled bricks are imported from England, and of these the famous "Farnley" brand are handled by Meeker & Carter, of New York; Chas. R. Weeks & Bro., of that city, handle three good brands of English bricks. But both the Griffin Enamelled Brick Co., Times Building, and E. Thomas Lynch, 54 East 23d Street, New York, make a first-class American enamelled brick fully equal, we think, to the English, if not superior. The former make the "Griffin" brand, the latter makes the "Matawan" brand.

### MIXING COLORED MORTARS, ETC.

C. C. Buck, architect, Albuquerque, N. M., inquired in our October number for information regarding the mixing of colored mortars, cleaning down brickwork, and other points. Prof. Ira O. Baker's book on Masonry Construction is a manual of the soundest character, and should be in every architect's library. It gives about all the information desired. On the first point, let our correspondent write for information to any of the leading mortar color makers, Samuel H. French & Co., or Pecora Paint Co., Philadelphia; Chattanooga Paint Co., Chattanooga, Tenn.; Clinton Metallic Paint Co., Clinton, N. Y.; Ricketson Paint Works, Milwaukee, Wis., etc., etc. They can give him information of direct and practical use.

BOSTON, Dec. 30, 1892.

### EDITOR OF THE BRICKBUILDER.

*Sir*, — I see in the October number of THE BRICKBUILDER that you ask suggestions from architects as to how to secure a good series of stock mouldings from the brickmakers.

I suggest that you offer a prize of some sort for the best twelve full-size mouldings for standard use, and other prizes for additional ones if necessary, or, in fact, arrange any way which you think best, and to get the architects to think out in full size the mouldings that they would like to have standard. It is the right way, I believe, to get at the end in view, or any end. Probably the prominent firms of brick masons would be willing to offer a very handsome prize for this purpose. The competition might be dignified by passing through the hands of the Society of Architects in some way.

Faithfully yours,

ROBERT D. ANDREWS.

4 LIBERTY SQ., BOSTON, MASS.

### EDITOR OF THE BRICKBUILDER.

*Dear Sir*, — Can you inform me where I can get information as to the tests to be made to determine the value of a deposit of fire-clay? Any information as to books or individuals from which I can obtain this data will be appreciated.

Yours truly,

W. M. A. PIKE.

## THE BRICKBUILDER COMPETITIONS.

**RULES:** All drawings must be sent in marked with some motto or device, and accompanied by a sealed envelope marked with the same, containing the full address of the competitor. The designs are judged by a committee of well-known architects, solely upon their merits, the names of the designers remaining unknown until the award is made, when the sealed envelopes corresponding to the devices on the designs are opened. To protect the interests of our advertising patrons it is stipulated that no ornamental bricks not found in their catalogues shall be used. This is really no restriction, for practically all of the leading manufacturers will be found represented in THE BRICKBUILDER. To encourage the study of effective use of the commoner materials, of two designs equally good, preference will be given that showing a skilful use of ordinary bricks to secure ornamental effect.

### REPORT OF THE JURY.

#### BRICKBUILDER COMPETITION FOR A \$2,000 BRICK HOUSE.

One of the most encouraging facts of this competition is the great variety of treatment which has been given to so simple a problem as the one before us. Owing to this variety and the good quality of most of the designs sent in, it was not an altogether easy task to select the best four, and no attempt has been made to place these four in order of merit. After careful consideration it seemed to the jury that the designs marked by *an eagle*, *T square and triangle*, "Plain Jane" and "Stanley," gave the best solution of the problem. The first-named design is excellent in its interesting character, its straightforward simplicity, and good proportion. The L might have to be done away with to bring the house within the required cost. The coats of arms on each side of the doorway are hardly appropriate unless we are to suppose that this is the abode of some decayed scion of nobility. The arrangement of the lot is good.

*T square and triangle* gives another good and commendably simple solution of the problem. The small side opening of the porch would be better suppressed. It is too insignificant and is not really necessary. "Plain Jane's" general idea is unusually attractive, but is not as well worked out as it might be. The arched windows come too near the edge of the gable for best effect, and the same criticism applies still more strongly to the dormer in the north elevation. It would be difficult to construct this dormer and prevent the ceiling from cutting across the sides of the arched window. Leaving the window where it is, the stepped gable over it should be raised by about the height of one of the steps. The arrangement of the lot, which is assumed to be a corner one, is well brought out. "Stanley's" design has a very cosey and homelike air, and the brick patterns are well used. It would be improved by removing the useless buttress placed against the bay-window merely to correspond with the constructional buttress against which the arch of the porch abuts. Structural members introduced for other than structural reasons always injure a design.

The designs by "Whiz," "Demos," and "Shield" also deserve special commendation. The latter is to be commended for its straightforward simplicity, but it is a little more bald than need be and, therefore, not as interesting as some of the others submitted. The treatment of the lot is especially good; but it would have been better to

## THE BRICKBUILDER.

have entered the garden directly at the side rather than by a right-angled bend. If it was designed to enter the garden on its axis, the plan of the house should have been so modified as to bring the back door directly opposite the central garden walk. The very attractive design of "Whiz" would have received a higher place but for a serious practical defect: the sills of the second-story windows are placed about four and a half feet from the floor. The brick diaper is out of place in the base course, where the eye requires an appearance of strength, which such a diaper lacks. The treatment of the lot is also very poor. It is utterly without design, properly so called, and would be very ugly in execution.

NOTES ACCOMPANYING DESIGN FOR A \$2,000 BRICK HOUSE SUBMITTED  
BY "DEMOS."

ARTHUR E. WELLS, BROOKLYN, N. Y.

It has been assumed that the lot faces the west.

In order that the building should not exceed the cost limit, the plan has been kept a simple square and all irregularity avoided.

It will be noticed that no room is dependent on windows placed in a side wall where the light and view might be obstructed by an adjoining building.

The arrangement of the rooms affords a south and west aspect to the living-room, while the dining-room in connection has the benefit of the early sun at the breakfasting hour.

The kitchen, by the arrangement of its windows, has effective cross ventilation, and the placing of the pantry doors shields it from view from the dining-room.

Provision has been made for the plumbing fixtures in positions in which they will be well lit, and may be grouped about a single stack of pipes and the system thus rendered simple, cheap, and effective.

The exterior has been treated in brick throughout and in the simplest manner.

The brickwork is intended to be of a rough character.

The bricks themselves should be hard-burnt, but may be rough and crooked, and vary in color from a bright red to a dull black. They should be laid as they come to hand, and jointed with a "struck" joint.

A treatment such as this would give to brickwork a play of light and shade that would make it almost equal to rough stonework in artistic effect, while it would have the advantage of being very inexpensive.

The roof is intended to be shingled, and it should be left to assume a soft tone of gray under the action of time and weather.

If the house were surrounded by foliage and covered with ivy, the external effect would be complete.

For the interior the author would use a simple classic trim for doors and windows, and mouldings of classic form throughout.

The stairs should be constructed with an open string and the balustrade composed of a simple hand rail carried on one inch square balusters spaced four to a step.

The balustrade should be of some hard wood and might be finished in natural color.

The trim, etc., throughout had best be painted in light colors to harmonize with the decoration in the various rooms.

The cellar windows, the high windows in living and dining rooms, and the stair window are casements; all other windows throughout are of the ordinary box frame type.

NOTES ACCOMPANYING DESIGN FOR A \$2,000 BRICK HOUSE SUBMITTED  
BY "TERRA CUITE."

C. HOWARD LLOYD, BOSTON, MASS.

The accompanying design was intended to follow in a general way the prevailing style of dwelling-houses in England. The second story of the building, as will be seen by the west elevation, is of half timber construction, and cannot fail in producing a pictorial effect. All of the first floor, as well as the entire north and south elevations, are constructed of brick (common) laid up in Flemish bond, and in white mortar, with moderately thick joints. It would add to the effect of the whole if the headers had a slightly darker color than the stretchers. The roof is covered with dark green shingles. Leaded white glass and casement windows are sometimes employed.

The first story is 9 feet high, the second also 9 feet. All joists are to be 3 inches by 9 inches.

This house will cost, exclusive of heating and plumbing, according to the author's estimate, about \$1,900.

First floor finished in natural pine, the second, paint.

NOTES ACCOMPANYING DESIGN FOR A \$2,000 BRICK HOUSE SUBMITTED BY  
"EAGLE IN WREATH."  
JAS. C. GREEN, ST. LOUIS, MO.

The author of the design has submitted plans to a reliable contractor in St. Louis, Mo., who states that the building can be built easily within the limit, using a gravel roof and omitting plumbing and heating. The outside vestibule in green oak; main hall curly pine; parlor, dining-room, and bedrooms in painted pine; kitchen, pantry, and bath-room in long-leaf yellow pine, hard oil finish—wainscot in bath-room & beaded yellow pine, five feet odd inches high. No wainscot elsewhere. Hard wood floor in hall, earth floor in basement.

## COMPETITION NO. 9.

A PEN DRAWING OF BRICK DETAIL.

*Programme.* In view of the fact that during the coming year the publishers of THE BRICKBUILDER purpose using a large number of illustrations, chiefly pen drawings, in the reading matter, it has been decided to offer a competition for the rendering of brick details, in pen and ink, in hopes that new talent in this line may be brought to their attention, and make it possible to secure a larger staff of illustrators. It is particularly desired to have at least one good draughtsman in each city upon whom the publishers may call for illustrations of local brickwork.

Competitors may choose their subjects, taking a photograph, print, or sketch to work from, but it is stipulated that nothing already published in THE BRICKBUILDER shall be used. Any detail, such as a window, bit of cornice, gable, chimney-top, or dormer, may be taken, and the taste shown in the selection will be considered in making the award. Mr. D. A. Gregg has consented to judge the drawings.

For the best five drawings prizes of three dollars each will be given. Any others that may be acceptable will be paid for at one dollar each, and after publication returned to the competitors. Drawings must be made on *smooth* cardboard, not larger than five by seven inches, and mailed to THE BRICKBUILDER, P. O. Box 3282, Boston, Mass., by Feb. 13, 1893.

## THE BRICKBUILDER FOR 1893.

It rarely happens that a periodical attains perfection with its first issue, or even its first year. No matter how much thought its editors and publishers may have given to its preparation, the first issue in some way fails to reach their ideal; and so it is to a great degree with each succeeding issue until the policy of the paper becomes thoroughly fixed. As each number comes from the press, it suggests some improvement to be made in future numbers. These improvements may be made from number to number, or they may wait until the close of a volume, or a year offers opportunity for sweeping changes, when the publication may be wholly remodelled. In our own case we have taken a middle course, making what we believe to be improvements from time to time, but reserving decided changes until the beginning of a new year. The indorsement of subscribers by the renewal of their subscriptions for 1893 has been so general that we conclude the policy of the past year has, on the whole, met with approval. While, therefore, following the same general lines, it is proposed to broaden our field and cover the use of all kinds of clay building materials. Terra-cotta, equally with brick, will come in for greatest attention, but considerable space will be devoted to roofing tiles, glazed and enamelled products, fire-proofing, limes, mortars, and cements, and other subjects directly in our field.

The principal changes outside of additional matter will be in typography and arrangement. The use of illustrations in the letter-press will be a regular feature, and these will be by the best draughtsmen. As in the past, a large proportion of the matter will be original and written expressly for THE BRICKBUILDER, only articles of direct bearing on our subject being reprinted from other journals, full credit being always given in such instances. The plates, to the number of eight or more, will occupy the middle of the paper, and these will be largely scale drawings of brick and terra-cotta work, while the illustrations in the letter-press will be perspectives and sketches of detail, or reproductions of photographs. Non-subscribers are respectfully referred to the opinions of subscribers printed on the third cover page.

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I would not be without it for five times the amount asked. — S. Mason, Pawtucket, R. I.

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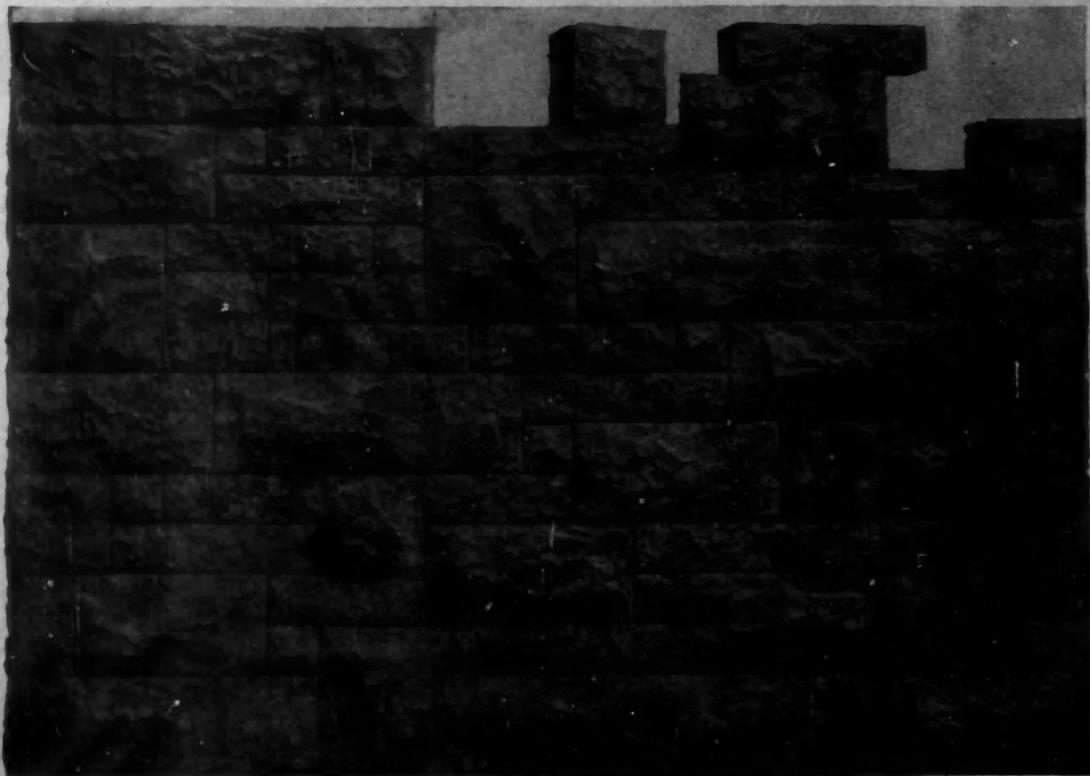
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